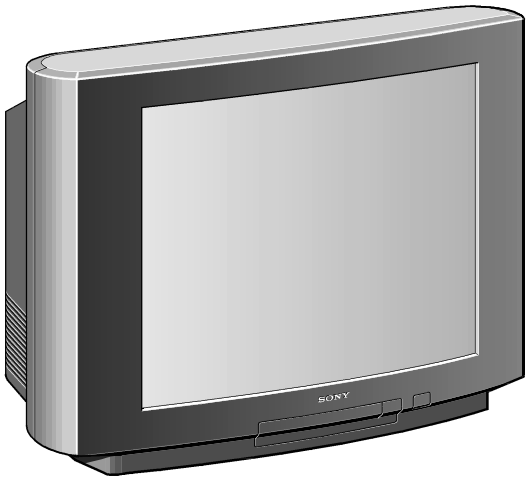
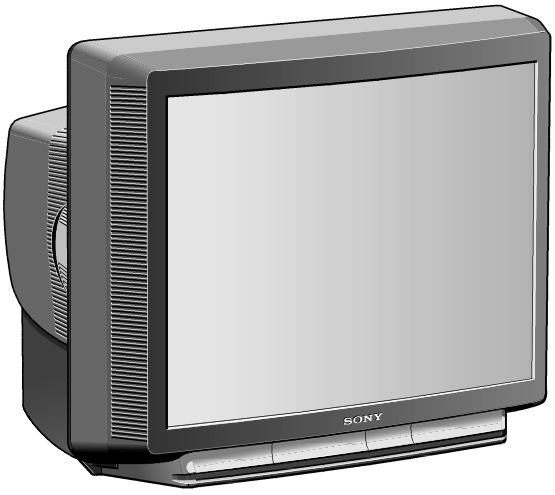
SERVICE MANUAL

BE-5 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-21C4B	RM-836	French	SCC-K36D-A
KV-21C4D	RM-836	AEP	SCC-K32F-A
KV-21C4E	RM-836	Spanish	SCC-K30F-A
KV-21C4K	RM-836	OIRT	SCC-K35H-A
KV-21C4R	RM-836	OIRT	SCC-K35G-A

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-21X4A	RM-836	Italian	SCC-K31E-A
KV-21X4B	RM-836	French	SCC-K36E-A
KV-21X4D	RM-836	AEP	SCC-K32G-A
KV-21X4E	RM-836	Spanish	SCC-K30G-A
KV-21X4K	RM-836	OIRT	SCC-K35K-A
KV-21X4L	RM-836	Irish	SCC-K34B-A
KV-21X4R	RM-836	OIRT	SCC-K35J-A
KV-21X4U	RM-836	UK	SCC-K33C-A





MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, UHF: E21-E69 Hyper: S1-S41	PAL NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58.4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK	I	Irish (KV-21X4L) VHF: A-C, D-J UHF:B21-B69 Cable Channels : S21-S41 Hyper: S1-S41 UK (KV-21X4U) UHF: B21-B69	PAL NTSC3.58/4.43 (video input only)

MODEL	21X4A	21C4B 21X4B	21C4D 21X4D	21C4E 21X4E	21C4K 21X4K	21X4L	21C4R 21X4R	21X4U
Power Consumption	70W	70W	70W	70W	70W	100W	70W	100W

SPECIFICATIONS

Picture Tube — Super Trinitron
Approx. 55 cm (21 inches)
(Approx. 51 cm picture measured diagonally)
100° -deflection

Rear/Front Terminals

[REAR]

1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB

[FRONT]

2 , Video input - phono jack
Audio inputs - phono jacks
S video input - 4 pin DIN
Headphone jack - stereo minijack

Sound output
Left/Right — 2x7W (RMS)
2x14W (music power)
Dimensions — 652x433x488 mm approx.(KV-21C4)
517x444x485 mm approx.(KV-21X4)
Weight — Approx. 21.5kg (KV-21C4)
Approx 22.5kg (KV-21X4)

Supplied accessories
RM-836 Remote Commander (1)
Batteries R6 (2)

Other features
Fastext
Txt/FLOF/TOP
NICAM (KV-21C4B/21C4E)
(KV-21X4B/21X4E/21X4L/21X4U)

[RM-836]

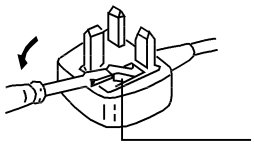
Remote control system — Infrared control
Power requirements — 3V dc (2 batteries) R6 (size AA)
Dimensions — Approx. 210x45x24 mm (w/h/d)
Weight — Approx. 90g (Not including battery)

Design and specifications are subject to change without notice.

Item \ Model name	KV-21C4B KV-21X4B	KV-21C4D KV-21X4D	KV-21C4E KV-21X4E	KV-21C4K KV-21X4K KV-21C4R KV-21X4R	KV-21X4L KV-21X4U
PIP	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF
Rotation Coil	OFF	OFF	OFF	OFF	OFF
VM (Velocity Modulation)	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON
Scart 2	OFF	OFF	OFF	OFF	OFF
Front in (3)	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	OFF	OFF	OFF	OFF	OFF
TXT	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	OFF
Norm I	ON	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	OFF
Norm L	ON	OFF	OFF	OFF	OFF
Language Preset	French	German	Spanish	OIRT	English

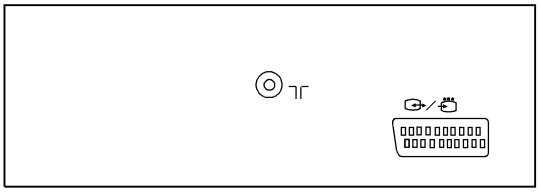
WARNING (KV-21X4U only)

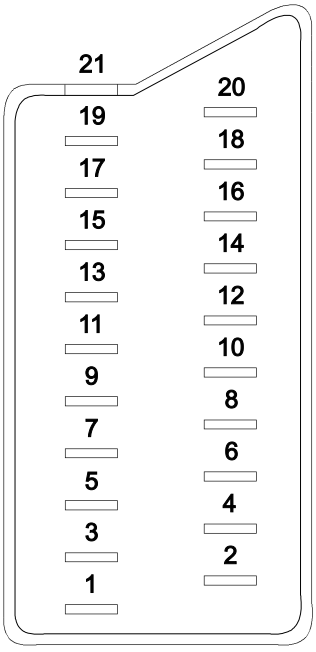
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (1)

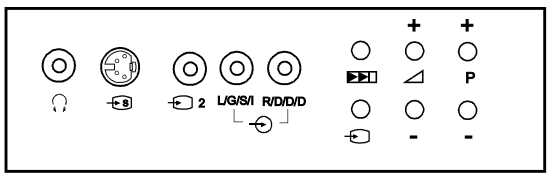




Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	–	–	Red input	0.7 ± 3dB, 75 ohms, positive
	–	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	–	–	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	–	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



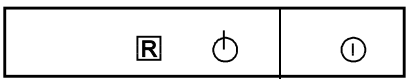


TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
	Getting Started	7
	TV Operation	9
	Menu Operation	9
	Teletext Operation	12
	Optional Connections	13
	Additional Information	13
2. DISASSEMBLY		
2-1.	Rear Cover Removal	14
2-2.	Service Position	14
2-3.	Picture Tube Removal	15
3. SET-UP ADJUSTMENTS		
3-1.	Beam Landing	16
3-2.	Convergence	17
3-3.	Screen (G), Drive, White Balance, Sub Colour and Sub Brightness	19
3-4.	Focus	19
4. CIRCUIT ADJUSTMENTS		
4-1.	Electrical Adjustments	20
4-2.	Test Mode 2 :	21
4-3.	BE-5 Self Diagnostic Software	23
5. DIAGRAMS		
5-1.	Block Diagrams	25
5-2.	Circuit Boards Location	30
5-3.	Schematic Diagrams and Printed Wiring Boards	30
	* A Board	35
	* H1, H2, H3 and F1 Board	40
	* C Board	42
5-4.	Semiconductors	45
5-5.	IC Block Diagrams	47
6. EXPLODED VIEWS		
6-1.	Chassis (KV-21C4)	49
6-2.	Picture Tube (KV-21C4)	50
6-3.	Chassis (KV-21X4)	51
6-4.	Picture Tube (KV-21X4)	52
7. ELECTRICAL PARTS LIST		53

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING!!

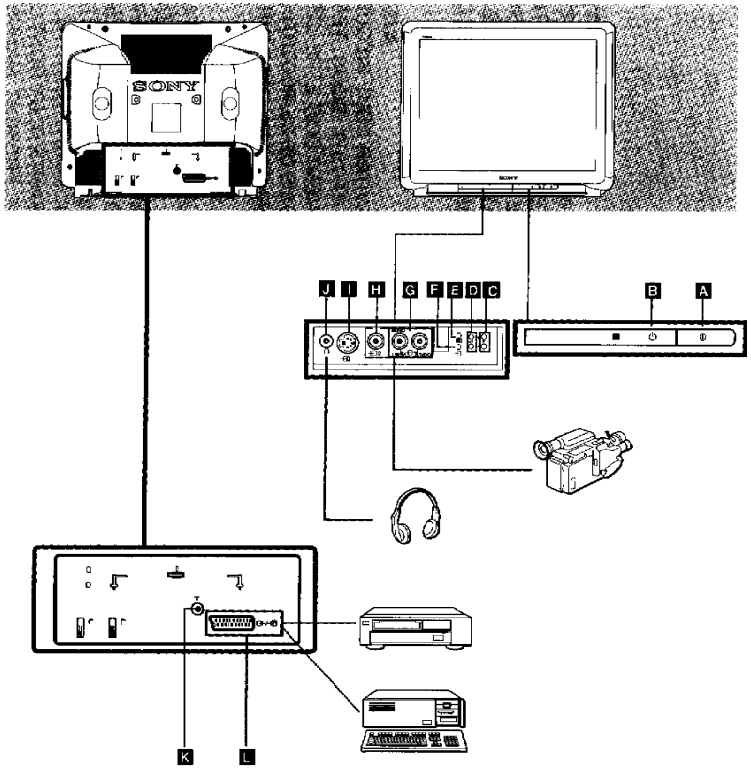
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

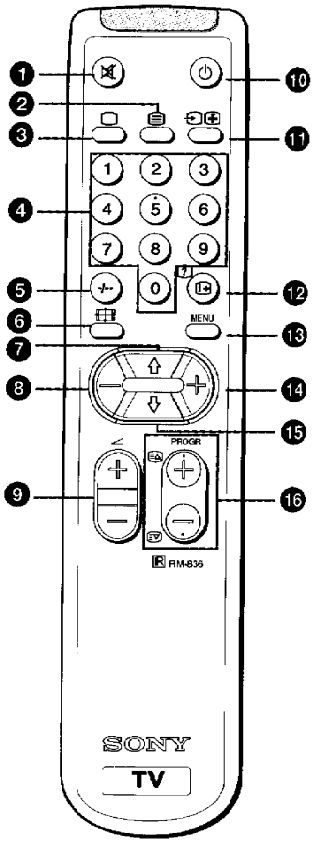
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

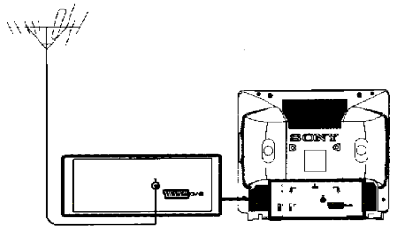




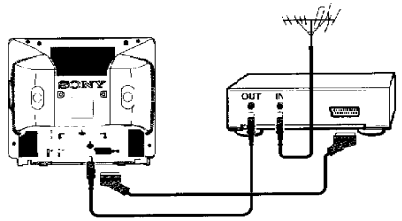
Please open the flaps at the front and at the back of the Instruction Manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander.

Step 1: Connecting the Aerial

(If you connect a VCR, skip to step 2).
Connect an external aerial to the socket) K at the rear of the TV.



Step 2: Connecting a VCR

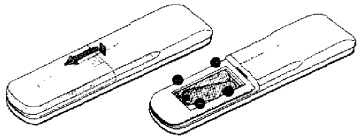


We recommend that you tune in the VCR signal to programme number "0". For details see "Presetting Channels Manually" on page 10.

Step 3: Connecting the Mains Plug

Connect the mains plug of the TV set to the electrical outlet (220-240 V AC, 50 Hz).

Step 4: Inserting the Batteries into the Remote Commander



Always remember to dispose of used batteries in an environmental friendly way.

Step 5: Remote Commander Overview

Refer to Symbol	Effect	Refer to Page
❶ 🔇	Sound on/off button	5
❷	Teletext on button	14
❸	TV button / TV power on Teletext off button	5 14
❹ 1... 9, 0	Number buttons	5
❺ -/- -	Double digit entering button	5
❻	Screen Format	5
❼, ❽, ⓮, ⓯	MENU: Cursor buttons to operate Menu functions TELETEXT: Fastext buttons	6 14
❾ +/-	Volume control	5
❿	Standby button	5
⓫	Input mode button Teletext: Freezing the subpage	15 14
⓬	On screen display button Teletext: Reveal button	5 14
⓭ MENU	Menu on/off button	6
⓰ PROGR +/-	Programme buttons Teletext: Page up/down buttons	5 14

Step 6: Presetting Channels Automatically

TV searches for all available channels. If manual tuning is preferred see Menu option - Presetting Channels Manually (page 10).

1 Depress power switch ⏻ A on TV set.

2 Press and hold ⏭ E on TV set for 2 seconds.
Auto tuning starts and screen shows.

- Channels are automatically stored as follows:

	KV-21X4U	KV-21X4L
Programme 1	BBC1	RTE1
Programme 2	BBC2	RTE2
Programme 3	ITV	BBC1
Programme 4	CH4 or S4C	BBC2
Programme 5	CH5 (if available in your area)	ITV
Programme 6	-	CH4 or S4C
Programme 7	-	CH5 (if available in your area)

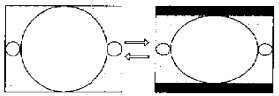
Note

- When Auto tuning stops, the programme position 1 is displayed.
- Programme names are automatically taken from Teletext if available. With that function, you can easily identify which channel you are watching.
- If you connect a VCR via the aerial cable, set the VCR to its test signal or play mode before auto-tuning.
- You may have to exchange the programme positions, if there are duplicated signals from local transmitters.

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the Remote Commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes).

To	Press
Switch on	• ⏻ A on TV
Switch off temporarily	• ⏻ 19 *TV is now in standby mode, indicator ⏻ B on TV lights.* **Auto Standby** (only in TV mode): *After 15 minutes without a TV signal and without pressing any button, the TV switches automatically into standby mode*
Switch on again	• ▢ 3, PROGR +/- 16 C or any number button 4
Switch off completely	• ⏻ A on TV *To save energy we recommend switching off completely when TV is not in use.*
Select programmes	• PROGR +/- 16 C or number buttons 4 *For double digit numbers press -/-- 5 then the number, e.g. for 23, press -/-- 5 then 2 and 3.*
Display the programme number	• 14 12 *Press again to make programme number disappear.*
Adjust the volume	• ◿+/- 9 D
Mute the sound	• 🔇 1 *Press again to restore sound.*
View video input	• ⇨ 11 F *Press ▢ 3 to return to TV programme.*
View programmes in 16:9 mode	• ▭, 6 *Press again to return to 4:3 mode*



Using the Menu Buttons

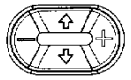
Use the following buttons on Remote Commander to control Menu screen.

1 Press MENU ⓲ to switch the Menu Screen on/off.

2 Use the coloured buttons as follows:

Green ❼
Scroll up

Red – ❽
decrease/select



Yellow + ⓮
increase/confirm(OK)

Blue ⓯
Scroll down

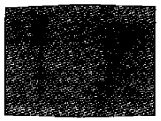
Note:
In case of error press MENU ⓲ twice and start again.

Using "Select Modes"

You can select different preset optimized picture and sound settings.

1 Press MENU ⓲.

2 Press yellow (OK) ⓮ to select (Select Modes).



3 Press green ❼ or blue ⓯ to select the desired mode:

- individual settings made in Picture and Sound Adjustments
- for video games
- for films
- for sports
- ecological (picture and brightness are set to optimal energy saving levels).

4 Press MENU ⓲ to return to normal TV screen.
The mode selected in step 3 is now stored.

Adjusting the Picture and Sound

Although picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

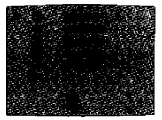
1 Press MENU ⓲.

2 Press green ❼ or blue ⓯ to select ● (Picture) or ♪ (Sound) and press yellow ⓮ (OK).

3 Press green ❼ or blue ⓯ to select the item you wish to change.

PICTURE CONTROL

Symbol	Item	- Effect	+
◑	• Picture	Less	More
◕	• Colour	Less	More
☼	• Brightness	Darker	Brighter
◫	• Sharpness	Softer	Sharper
	• Hue control (only for NTSC video signals)	Reddish	Greenish
	• Reset	Reset to factory preset picture level	
	• The respective symbol appears, indicating the picture and sound mode you selected.		



SOUND CONTROL

Symbol	Item	- Effect	+
	• MONO/STEREO	A: channel 1 Stereo	B: channel 2 Mono
	• Treble	Less	More
	• Bass	Less	More
B	• Balance	More left	More Right
	• Headphones Volume	Less	More
	MONO/STEREO	A: channel 1 Stereo	B: channel 2 Mono
	• Reset	Reset to factory preset sound level	
	• The respective symbol appears, indicating the picture and sound mode you selected.		

4 Press red ❽ or yellow ⓮ to change levels.

5 Press MENU ⓲ to return to normal TV screen.

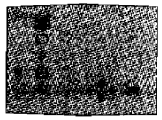
- **When receiving a NICAM or DUAL programme:**
  1. Nicam Stereo/Monoaural: or appears on the screen.
  2. Nicam bilingual/Dual: or appears on the screen.

Using the "Sleep Timer"

The TV may be set to switch to the standby mode automatically after a length of time chosen by you. You may set the time in 15 minutes steps up to 4 hours.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ◴ and press yellow (OK) ⓮ to select ◴ (Sleep Timer)



3 Press red ❽ or yellow ⓮ to set time delay.
0:00 (OFF) 0:15 0:30 0:45 .... 4:00

4 Press MENU ⓭ to return to normal TV screen.

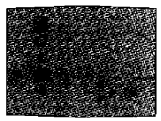
Note:
When watching TV, press ⓬ to display time remaining.

Using the "Wake Up Timer"

The TV may be set to switch on automatically after a length of time chosen by you. You may set the time in 15 minutes steps up to 12 hours.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ◴ and press yellow (OK) ⓮



3 Press green ❼ or blue ⓯ to select ◴ (Wake Up Timer)

4 Press red ❽ or yellow ⓮ to set time
0:00 (OFF) 0:15 0:30 0:45 .... 12:00

5 Press the standby button ⏻ ❿ (standby indicator ⏻ B on the TV flashes regularly to indicate that the "Wake Up Timer" is active). After the length of time you selected, the TV switch on automatically.

Notes:

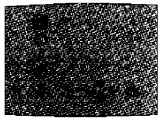
- If you use the "Wake Up Timer" to switch the TV on and for one hour after the switching on, no TV or Remote Commander button is pressed, the TV switches itself back into Standby mode and the indicator ⏻ B on TV lights.
- Any temporary power failure will cause a misfunction in the "Wake Up Timer" and you will have to reset the "Wake Up Timer".

Presetting Channels Manually

Up to 100 programme positions are available for presetting channels.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ⇳ and press yellow (OK) ⓮.



3 Select programme number using PROGR +/- ⓰ C or the number buttons ❹.

4 Press green ❼ or blue ⓯ to select tuning bar (IIIII...) and press red ❽ or yellow ⓬ to start channel search.When a channel is found the tuning bar stops moving and you see the picture.

5 If you want to store, press green ❼ or blue ⓯ to select ◇ and press yellow (OK) ⓮. If you don't want to store, press red ❽ or yellow ⓬ to continue search.

6 Repeat steps 3 to 5 for all other channels.

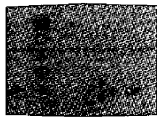
7 Press MENU ⓭ to return to normal TV screen.

Skipping Programme Positions

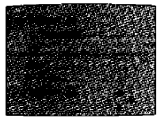
You can skip unused programme positions when selecting channels with the PROGR +/- ⓰ C buttons.
You can still select them, however, using the number buttons ❹.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ⇳ and press yellow ⓮.



3 Select programme number you want to skip using PROGR +/- ⓰ C or number buttons ❹.



4 Press green ❼ or blue ⓯ to select Coo and press yellow (OK) ⓮.

5 Press green ❼ or blue ⓯ to select ◇ and press yellow (OK) ⓮ to store.

6 Repeat steps 3 to 5 for other unused programme positions.

7 Press MENU ⓭ to return to normal TV screen.

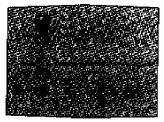
Fine-Tuning Channels

You can fine tune a stored channel.

1 Select the channel you wish to fine tune.

2 Press MENU ⓭.

3 Press green ❼ or blue ⓯ button to select ⇨ and press yellow (OK) ⓮.



4 Press green ❼ or blue ⓯ to select ←F→ and use red ❽ or yellow ⓮ to adjust tuning.

5 Press green ❼ or blue ⓯ to select ◇ and press yellow (OK) ⓮ to store.

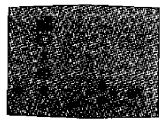
6 Press MENU ⓭ to return to normal TV screen.

Exchanging Programme Positions

After tuning you may wish to rearrange the programme positions.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ button to select ⇨ and press yellow (OK) ⓮.



3 Press green ❼ or blue ⓯ to select PROGR 卐 and press yellow (OK) ⓮.

4 Press red ❽ or yellow ⓮ to select the first programme position.

5 Press the blue ⓯ button.

6 Press red ❽ or yellow ⓮ to select the second programme position.

7 Press blue ⓯ to select 卐 and press yellow (OK) ⓮ to exchange.

8 Repeat steps 4 to 7 for other programme positions.

9 Press MENU ⓭ to return to normal TV screen.

Viewing Teletext

Teletext is an information service broadcast by most TV stations.

1 Select the channel which carries the teletext service you wish to receive.

2 Press ▤ ❷ to switch on teletext.

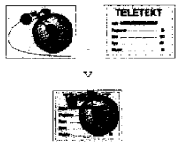
3 Input three digits for the page number using the programme number buttons ❹ or ⓫/⓬ ⓰ (next or previous page).

4 Press ▢ ❸ to switch off teletext.

Note:
Teletext errors may occur if the broadcasting signals are weak.

Using Other Teletext Functions

Superimposing teletext on the TV



Press ▤ ❷ once in teletext mode or twice in TV mode to superimpose teletext on the TV screen.
Press ▤ ❷ again to cancel superimposing.

Freezing a teletext subpage

Press ⊕ ❶ (HOLD) to freeze the subpage. Freezing the page prevents the information that is displayed from being updated.
Press ⊕ ❶ to cancel HOLD and allow update to continue.

Revealing concealed information (eg: answers to a quiz).

Press ? ⓬ to reveal information.
Press again to conceal the information.

Using colour buttons to access pages (Fastext)

When the colour coded menu appears at the bottom of a page, press the colour button (green, red, yellow or blue) ❼❽⓮⓯ to access the corresponding page.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the back flap page of this manual.

Symbol	Acceptable input signals
→/→2 G H →S I	• Normal audio/video and S video through the phono jacks.
→/→ L	• Normal audio/video and RGB through Euro AV connector.

Note: Make sure not to switch on the equipments connected to the front connectors →2 H and →S I at the same time.

Selecting the Input

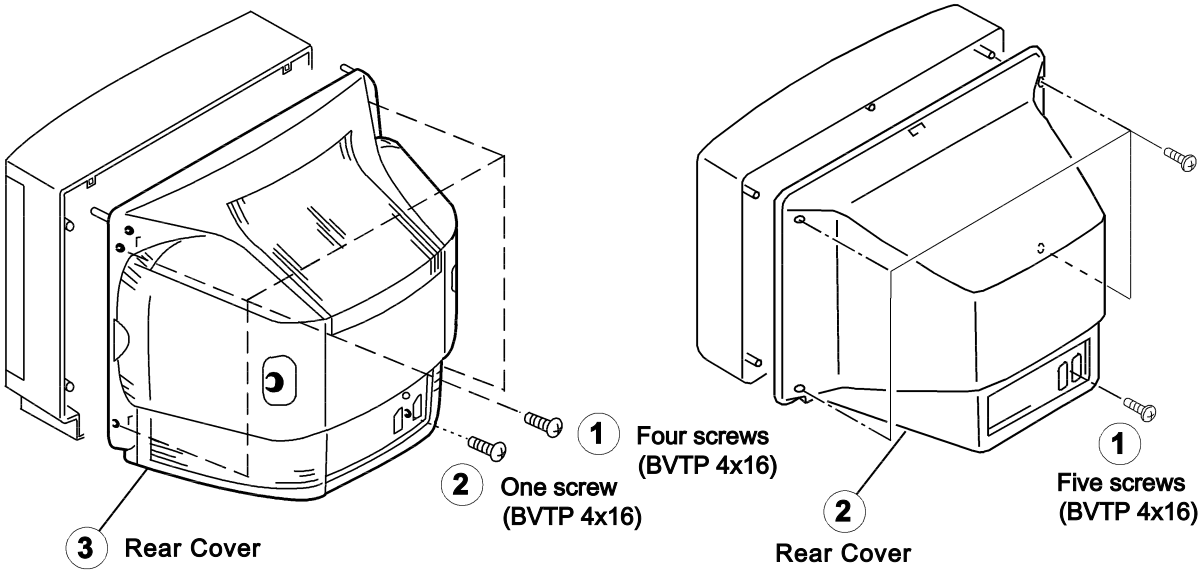
Press → ❶ F repeatedly to select the desired video source.
Press ▢ ❸ to return to normal TV operation.

Connecting Headphones

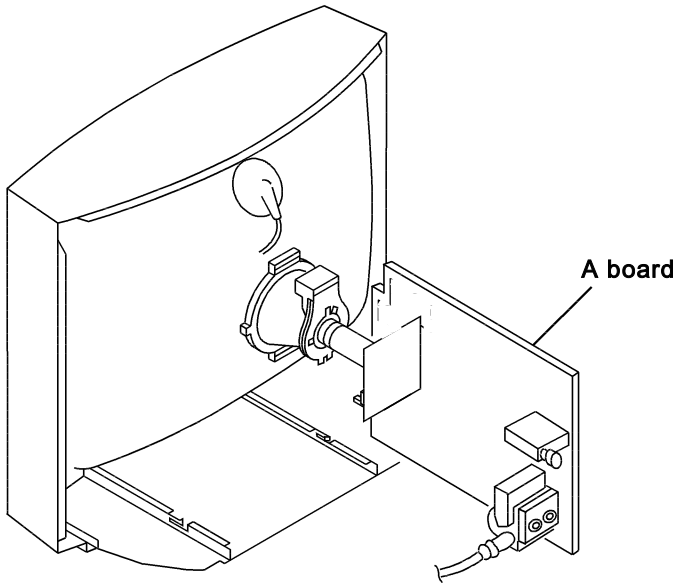
Plug in the headphones to the Ω J socket on the front of the TV set.

SECTION 2
DISASSEMBLY

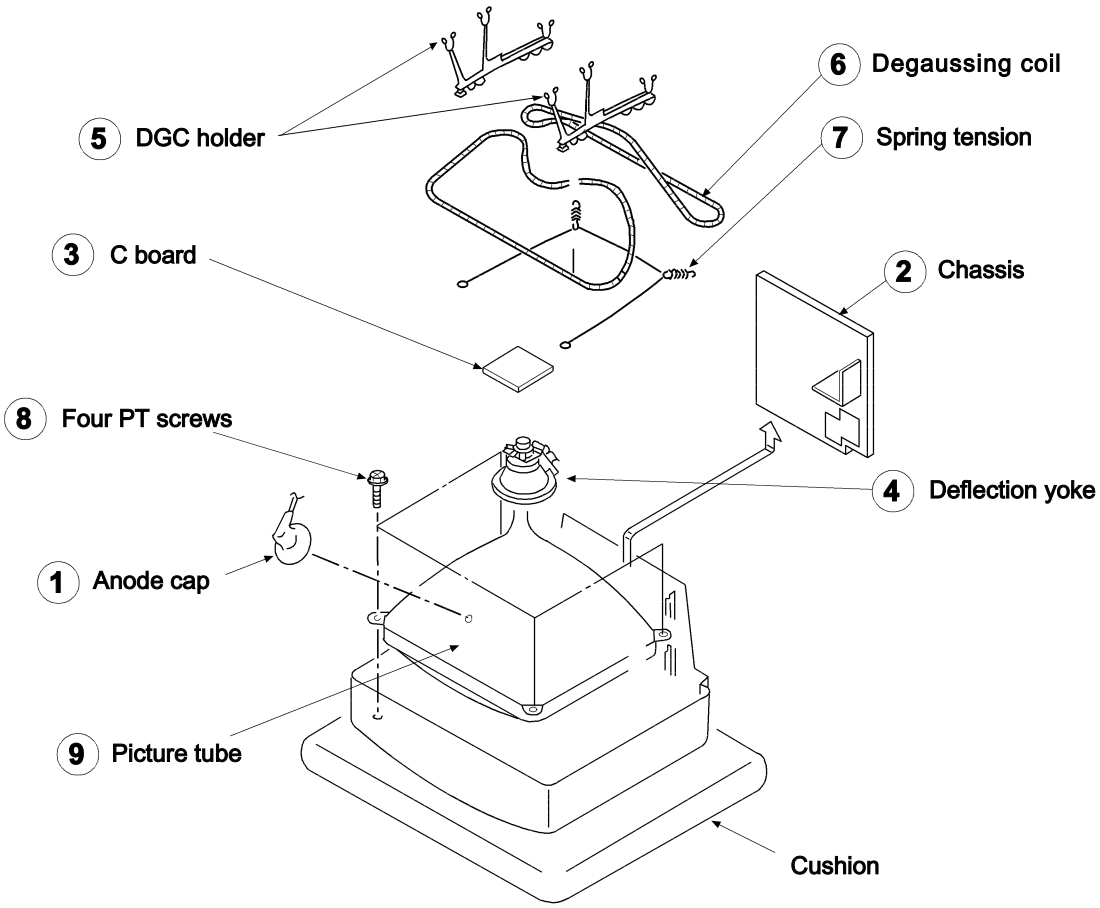
2-1. REAR COVER REMOVAL



2-2. SERVICE POSITION



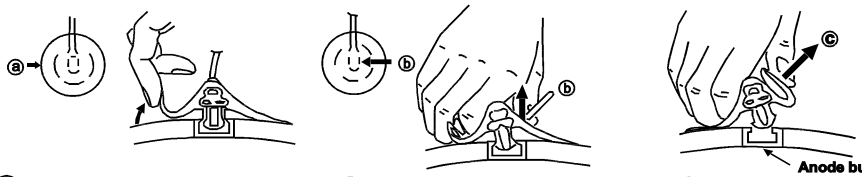
2-3. PICTURE TUBE REMOVAL



- **REMOVAL OF ANODE-CAP**

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

*** REMOVING PROCEDURES.**



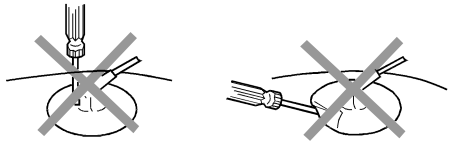
① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

- **HOW TO HANDLE AN ANODE-CAP**

1. Don't damage the surface of anode-cap with sharp shaped material !
2. Don't press the rubber hardly not to hurt inside of anode-caps !
   A metal fitting called as shatter-hook terminal is built into the rubber.
3. Don't turn the foot of rubber over hardly !
   The shatter-hook terminal will stick out or damage the rubber.



SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with the rated power supply voltage, unless otherwise noted.

The Contrast and Brightness controls should be set as follows unless otherwise noted:

CONTRAST control 80%
(or Normal by commander)
BRIGHTNESS control 50%

Perform the adjustments in the following order:
1. Beam Landing
2. Convergence
3. Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness.
4. Focus

Note: Test Equipment Required.
1. Colour bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation:
- In order to reduce the influence of external magnetic forces on the picture tube, face the TV set in an easterly or westerly direction.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

3-1. BEAM LANDING

Demagnetize with a degausser.
1. Input an all white raster signal from the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Switch the raster signal of the pattern generator to Red.
3. Move the deflection yoke backward, and adjust with the purity control so that Red is at the centre and the Blue and Green are evenly spaced at the sides. see (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes Red. (Fig. 3-1)
5. Switch the raster signal to Blue and then Green to confirm the condition.
6. When the position of the deflection yoke has been determined, tighten it with the deflection yoke mounting screw.
7. When the landing at the corners is not correct, adjust by using disk magnets. (Fig. 3-4)

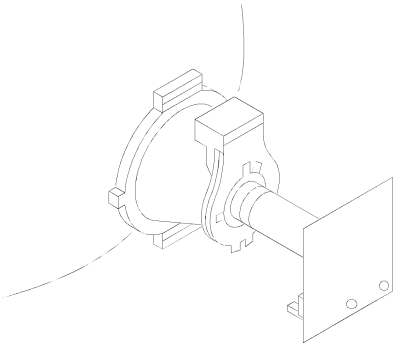


Fig. 3-1

Fig. 3-2

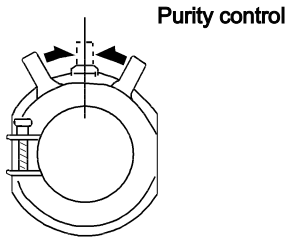


Fig. 3-3

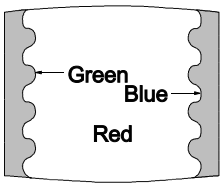
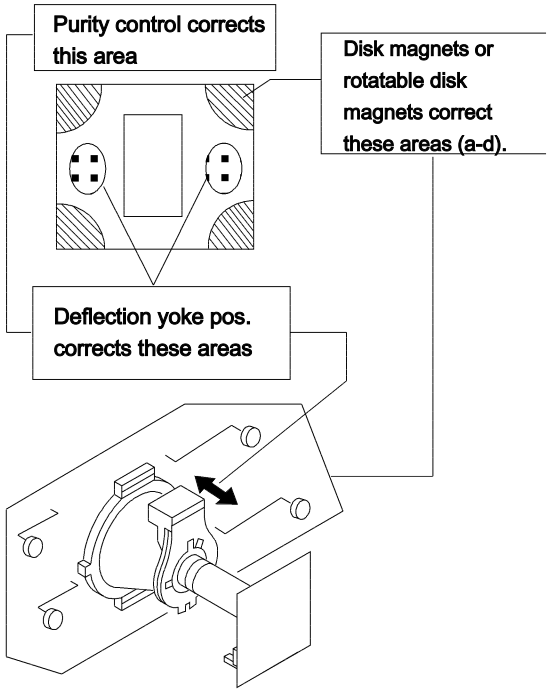


Fig. 3-4

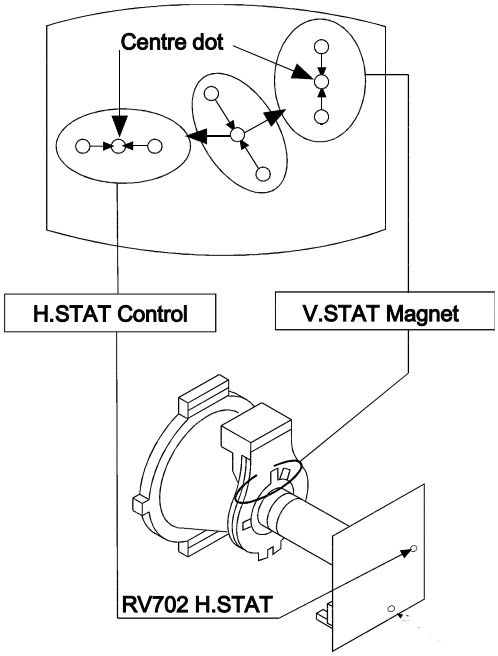

Purity control corrects this area
Disk magnets or rotatable disk magnets correct these areas (a-d).
Deflection yoke pos. corrects these areas

3-2. CONVERGENCE

Preparation:

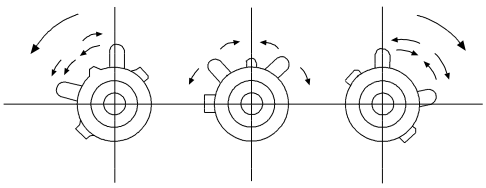
- Before starting, perform FOCUS, H.SIZE, and V.SIZE adjustments.
- Set the BRIGHTNESS control to minimum.
- Input a dot pattern from the pattern generator.

(1) Horizontal and Vertical Static Convergence

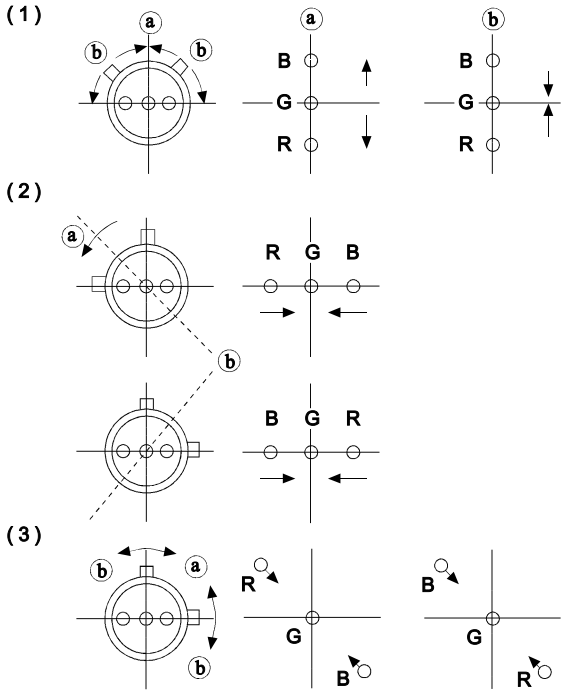


1. Adjust the H.STAT control to converge the Red, Green and Blue dots at the centre of the screen. (Horizontal movement)
2. Adjust the V.STAT magnet to converge the Red, Green and Blue dots at the centre of the screen. (Vertical movement)

- If the horizontal dots cannot coincide with variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking.
  (Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)



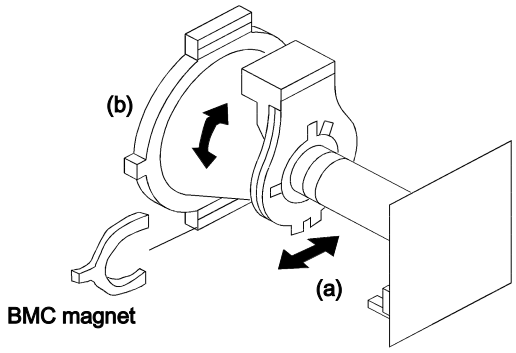
3. When the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the Red, Green and Blue dots move as shown below.



If the Red and Blue dots do not converge with the Green dots, perform the following steps.

1. Move the BMC magnet (a) to correct for insufficient H.static convergence.
2. Rotate the BMC magnet (b) to correct for insufficient V.static convergence.

In either case, repeat the Beam Landing Adjustment.

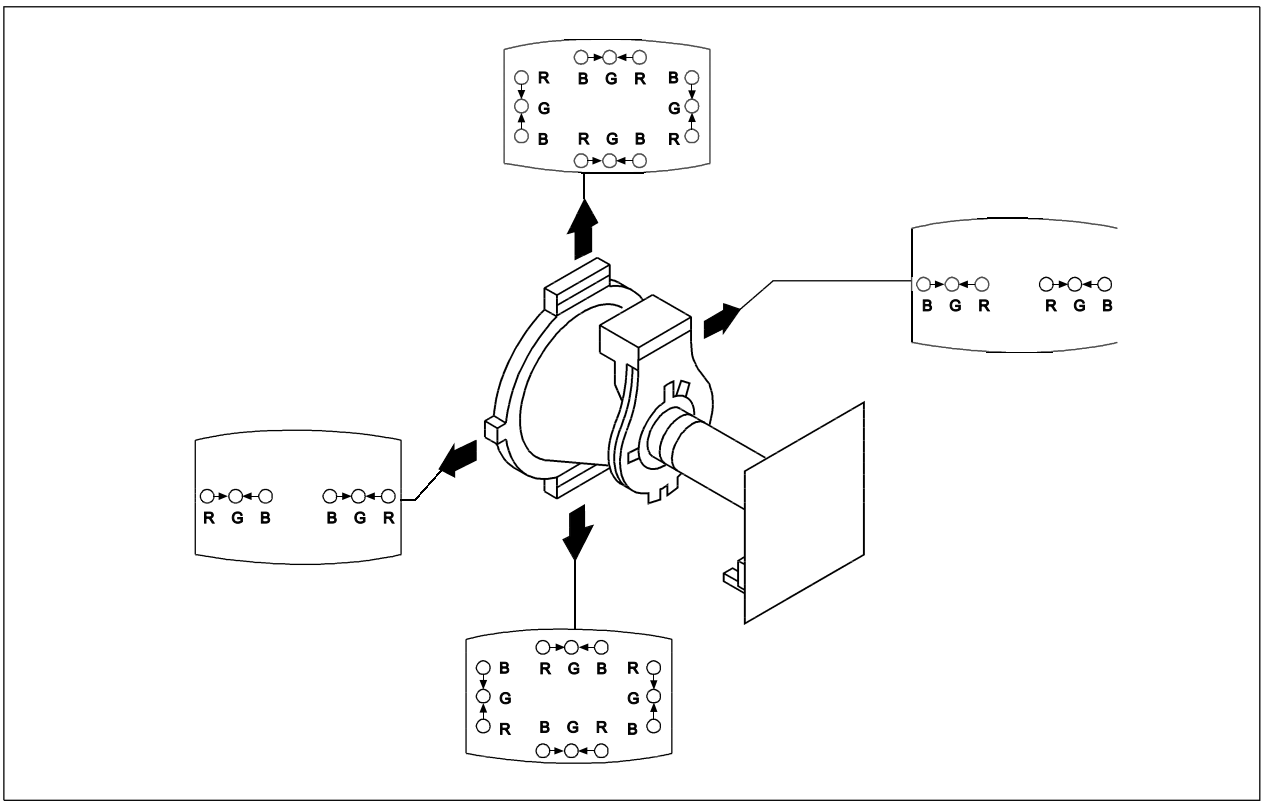


(2) Dynamic Convergence Adjustment

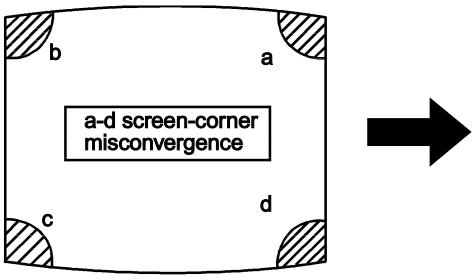
Preparation:

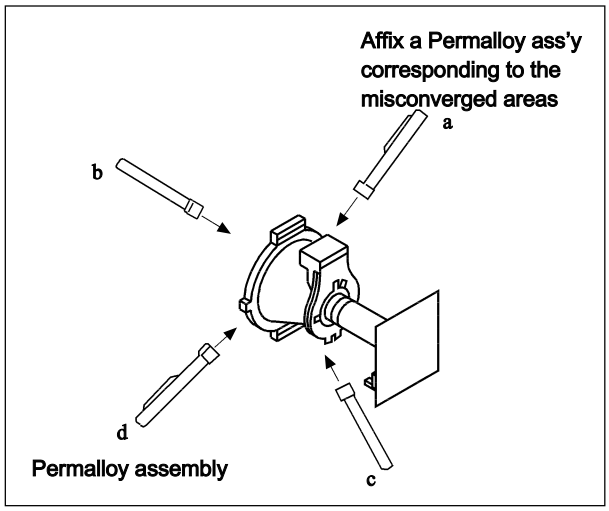
- Before starting, perform the Horizontal and Vertical static convergence adjustment.

1. Slightly loosen the deflection yoke screw.
2. Remove the deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

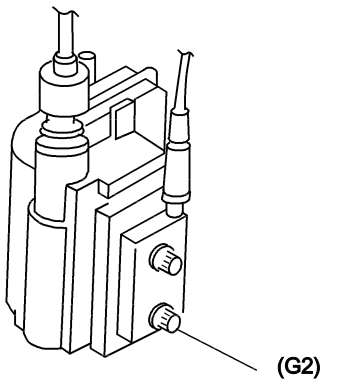


(3) Screen-corner Convergence.





3-3. SCREEN (G2), DRIVE, WHITE BALANCE, SUB COLOUR and SUB BRIGHTNESS.

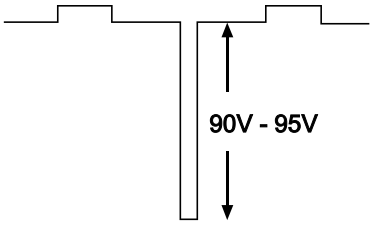


Screen (G2) setting

1. Input a 0 IRE (Black Level) signal from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 38.
3. Adjust the SCREEN VR until the Down arrow is displayed.
4. Adjust the SCREEN VR until the Down arrow just disappears.
5. Press the TV Button on the Remote Commander to store the data.

Drive Level

1. Input a Video signal containing a small area of 100% white on a black background.
2. Connect an oscilloscope to Pin (10) of J701 (R OUT) on the C Board.
3. Set the Picture to maximum using "Test""Test" and 01.
4. Enter into the Service mode (Adjust Menu).
5. Using the Blue and Green buttons select "RED HWB".
6. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform has an amplitude of 90V - 95V.

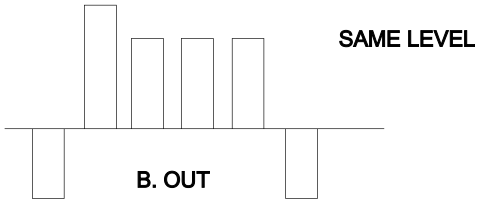


White Balance Adjustment

1. Input an all white pattern from the pattern generator.
2. Adjust the Colour and Brightness controls to the standard level.
3. Enter into the Service Mode.
4. Adjust the Green HWB and Blue HWB so that the White Balance becomes optimum.

Sub Colour Adjustment

1. Input a PAL colour bar pattern from the pattern generator.
2. Connect an oscilloscope to Pin (8) of J701 (B OUT) on the C Board.
3. Enter into the Service Mode "Test""Test" and 22.
4. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform becomes as follows :



.

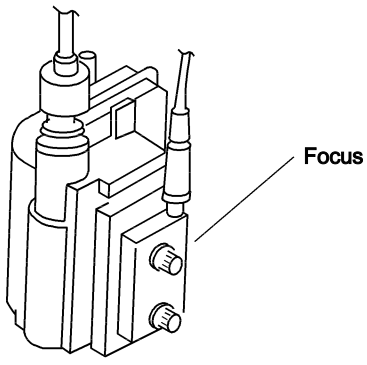
Note : If the TV is able to receive PAL and SECAM transmissions, repeat the above procedure using a Secam colour bar signal.

Sub Brightness Adjustment

1. Input a Philips pattern from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 23.
3. Using the Red and Yellow buttons on the Remote Commander adjust until the 0 IRE of the grey scale and the cut off are only slightly visible on the screen.

3-4. FOCUS

1. Receive a television broadcast.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer to focus the screen centre area properly.
   Bring only the centre area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



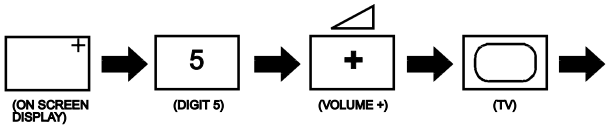
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied Remote Control Commander RM-836.

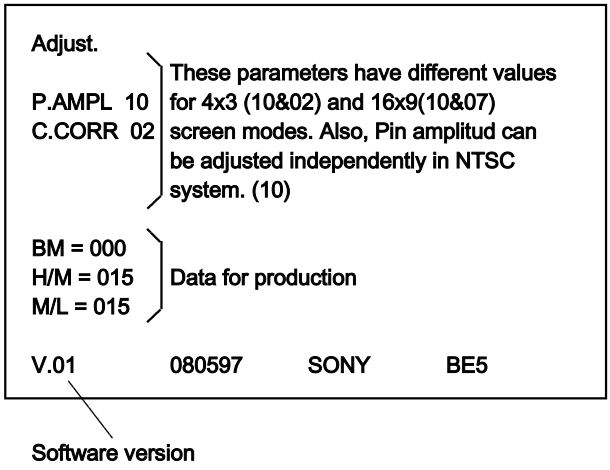
HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power of the set and enter into stand-by mode.
2. Press the following sequence of buttons on the Remote Control Commander.



"TT-- " will appear in the top right corner of the screen Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.


Adjust.
P.AMPL 10
C.CORR 02
These parameters have different values for 4x3 (10&02) and 16x9(10&07) screen modes. Also, Pin amplitud can be adjusted independently in NTSC system. (10)
BM = 000
H/M = 015
M/L = 015
Data for production
V.01 080597 SONY BE5
Software version

4. Press the Blue (Next) or Green (previous) buttons to select the adjustment item from the table.
5. Press the Yellow (+) or Red (-) buttons to change the data as required.
6. Turn off the power to quit the service mode when adjustments are completed.

Range of adjustments available from the on screen menu system.

Adjustment	Set	Range
V size	35	00 - 63
V breth	15	00 - 63
Pin amp	10 4:3 10 16:9	00 - 63
Para. tilt	45	00 - 63
V linear	42	00 - 63
Corner corr	02 : 4:3 07 : 16:9	00 - 63
H Ampl	34	00 - 63
V pos	35	00 - 63
H phase	42	00 - 63
Blue	20	00 - 63
Green	25	00 - 63
Red	40	00 - 63
V cent	40	00 - 63
HV blk 1	00	00 - 63
HV blk 2	00	00 - 63
Zwei max	38	00 - 63
Zwei min	18	00 - 63
Zwei time	18	00 - 63

4-2. TEST MODE 2:

TT -- Mode is available by pressing the Test button twice, O.S.D 'TT --' appears. The functions described below are available by pressing two digits. To release the 'TT --' mode, press 0 twice, press 'TEST' , press 'TV' or switch the TV into Stand-by mode.

00	switch TT-off
01	Set picture level maximum
02	Set picture level minimum
03	No function
04	Set volume to 50% of maximum
05	Set volume to 65% of maximum
06	Set volume to 80% of maximum
07	Enable Ageing condition
08	Set TV shipping conditions
09	No function
10	No function
11	Sets zoom mode in 4:3 and TT menu
12-16	No function
17	Meshing Enable or Disable
18	No function
19	RGB priority Enable or Disable
20-21	No function
22	Subcolour PAL, SECAM
23	Sub Brightness Adjustment
24	Enable tuning for systems B/G/L
25	Enable tuning for systems B/G/D/K
26	Enable tuning for system I
27	Enable tuning for system I/I
28	Enable tuning for system B/G
29	Enable tuning for system D/K/B/G
30	Enable tuning for system B/G/D/K
31	No function
32	Picture level to 50%
33-35	No function
36	Audio mute ON
37	OSD off
38	G2 Adjustment
39-47	No function

48	set NVM testbyte to 44h
49	erase NVM testbyte
50	toggle 16:9/4:3 models
51	toggle 100/60 programs and YC Enable or Disable
52	set MEGABASS ON and BASS to max
53-54	No function
55	OSD horizontal adjustment, left side
56-59	No function
60	MAGABESS ON
61	MEGABASS OFF
62	IQ MODES ON
63	IQ MODES OFF
64-65	No function
66	OSD horizontal adjustment, right side
67-70	No function
71(*)	TXT white balance adjustment
72	Auto standby off
73	sets PAL - NTSC missidentification countermeasure ON
74	sets PAL - NTSC missidentification countermeasure OFF
75	text not interlaced and odd field
76	text not interlaced and even field
77	toggle text destination west or east
78-87	No function
88	Sets v size to min and ZOOM 1
89-98	No function
99	Recovers v size and sets ZOOM 3

(*) TEXT WHITE BALANCE ADJUSTMENT

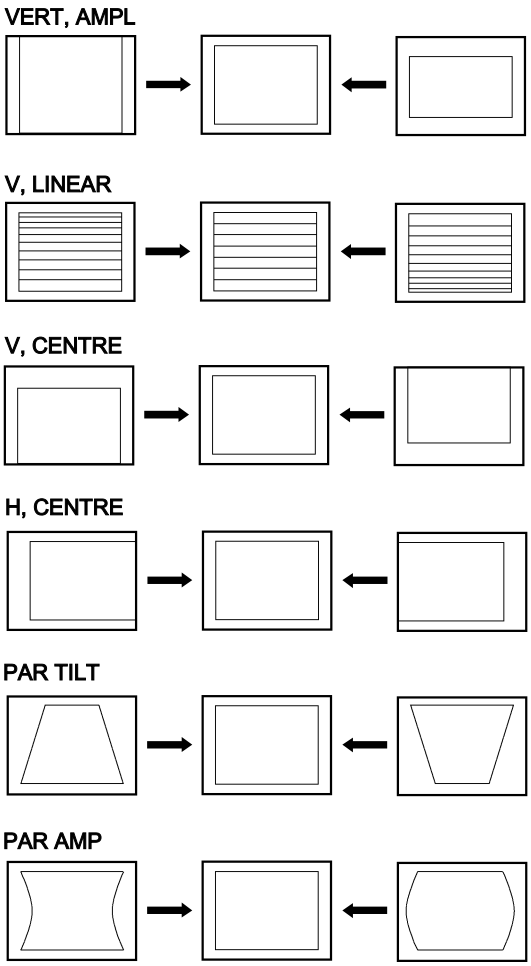
GREEN KEY : GREEN PLUS (0 TO 63 WITH SCROLL)
RED KEY : GREEN MINUS (0 TO 63 WITH SCROLL)
BLUE KEY : BLUE PLUS (0 TO 63 WITH SCROLL)
YELLOW KEY : BLUE MINUS (0 TO 63 WITH SCROLL)

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the service mode.
2. Using the Blue or Green buttons select the Adjust item.
3. Press the Yellow button to enter the adjustment submenu.
4. Select and adjust each item in order to obtain the optimum image.

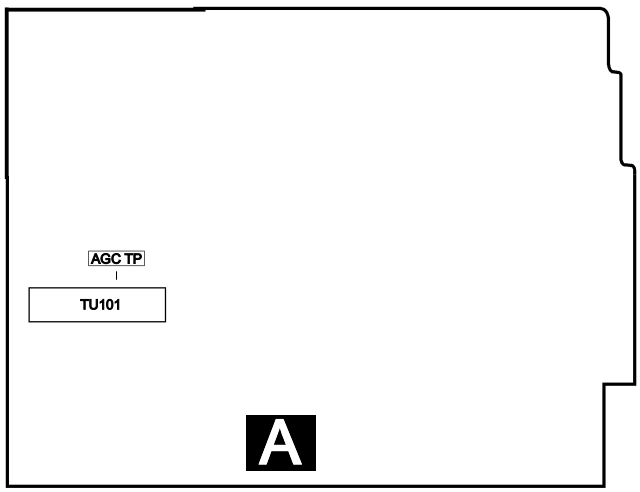
See Note on page 23

Adjustment	Set	Range
V size	35	00 - 63
V breth	15	00 - 63
Pin amp	10 4:3 10 16:9	00 - 63
Para. tilt	45	00 - 63
V linear	42	00 - 63
Corner corr	02 : 4:3 07 : 16:9	00 - 63
H Ampl	34	00 - 63
V pos	35	00 - 63
H phase	42	00 - 63
Blue	20	00 - 63
Green	25	00 - 63
Red	40	00 - 63
V cent	40	00 - 63
HV blk 1	00	00 - 63
HV blk 2	00	00 - 63
Zwei max	38	00 - 63
Zwei min	18	00 - 63
Zwei time	18	00 - 63



AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at AGC TP.
3. Adjust TU101 RV to obtain a voltage of 3.0 ± 0.3V.



- A Board Component Side -

4-3. BE-5 SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-5 chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to I^2C. In the event of one of these situations arising the software will first try to release the Bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each relevant device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED by a Series of flashes which must be counted (See Table 1), Non fatal errors are reported with this method.

If a fatal error is found, the set will simply stay in whichever state it was when the error occurred, but if a non fatal error occurs the set will try to continue to operate.
To check error code it is necessary to use TV error display part number S-188-900-10.

Table 1

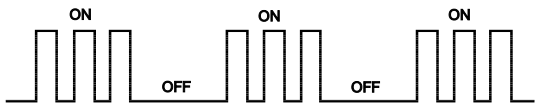
No. of Flashes	Notes	Error code	Description
-		00	No error.
2	(2)	30	Jungle nacks IIC bus1 transmisson.
3	(3)	31	Jungle FAULT (not OK) - flags.
4	(2)	32	Jungle - No H flyback.
-		33	Jungle - Stack overflow.
5	(4)	40	Sound Processor nacks IIC bus1 transmission.
6	(3)	91	Protection error: No V synchro.
7	(1)	10	NVM nacks IIC bus0 transmission.
8	(3)	20	Tuner nacks IIC bus1 transmission.
9	(1)	01	General IIC bus1 error (SDA1 or SCL1 are being held low.)
10	(3)	90	Protection input: X-ray protection.

(1) Only reported on mains power up.
(2) Reported on mains power up or exiting standby.
(3) Reported at any time and result in the set reverting to standby mode.
(4) Reported at any time and result in the set reverting to audio mute mode.

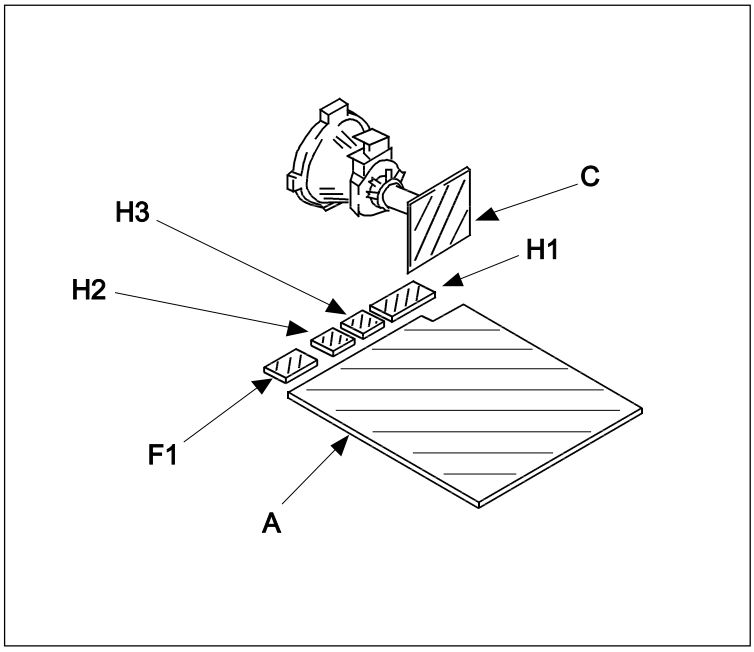
Note : Deflection System Adjustments should not be carried out whilst using an NTSC (60Hz) signal, or if the signal is unlocked.

Flash Timing Example : e.g. error number 3

Stby LED



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm Rating electrical power ¼ W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth - ground.
- : earth - chassis.
- : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Reference information

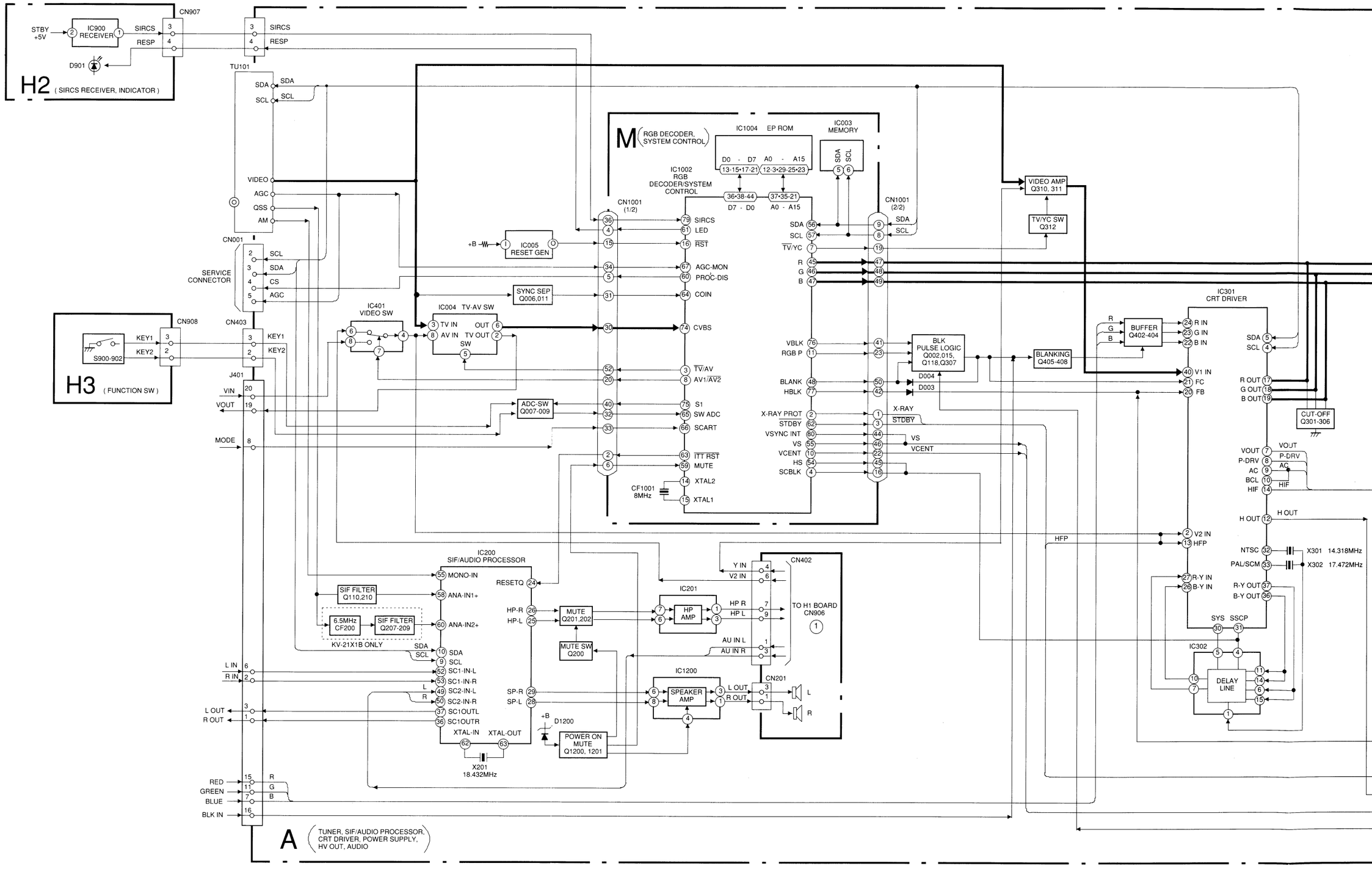
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ⨳	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

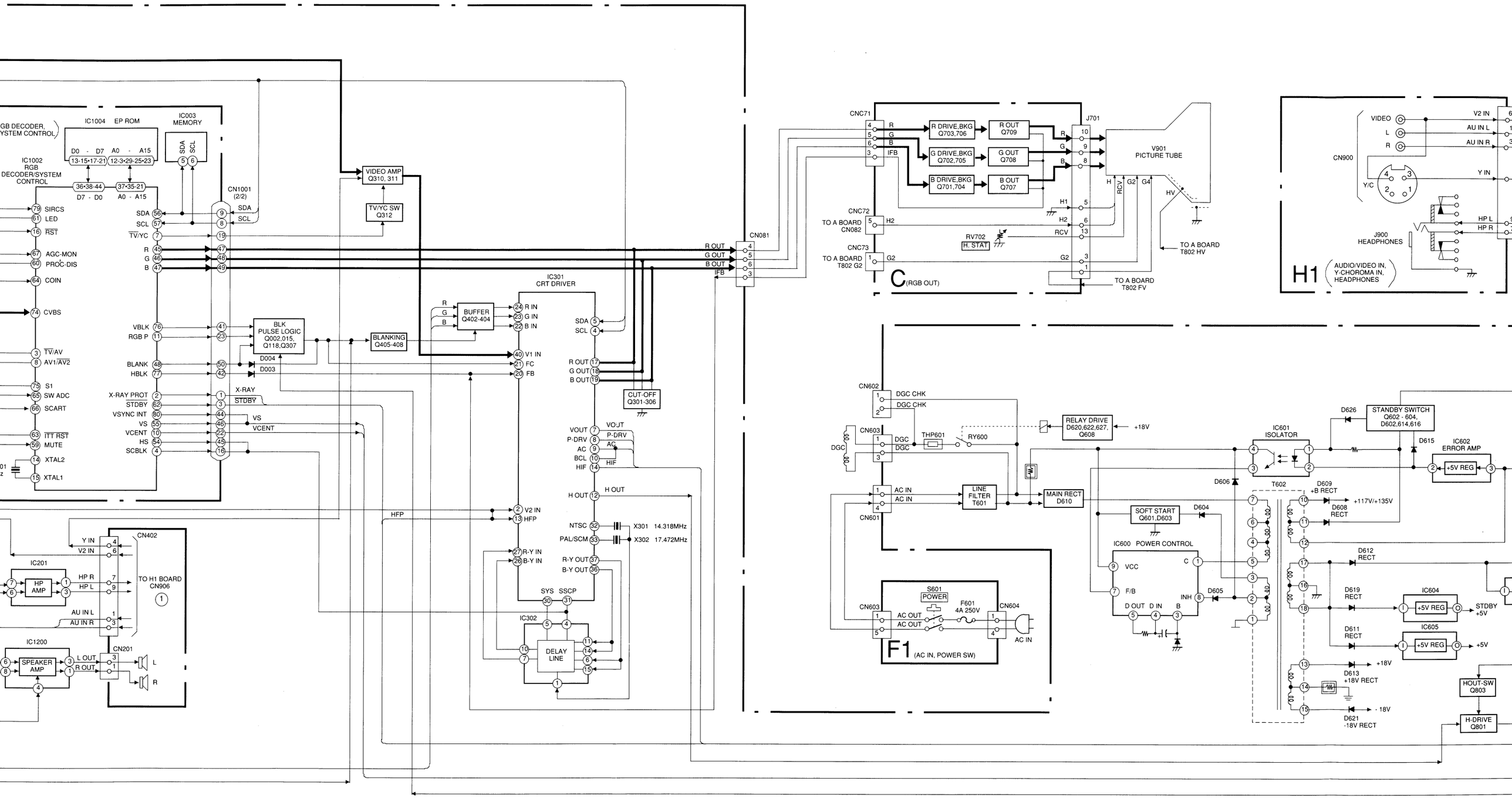
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

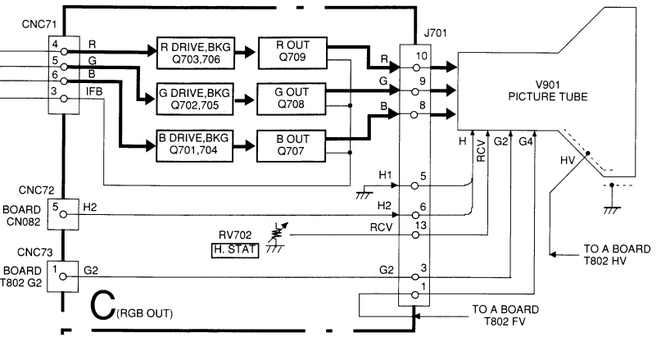
SECTION 5

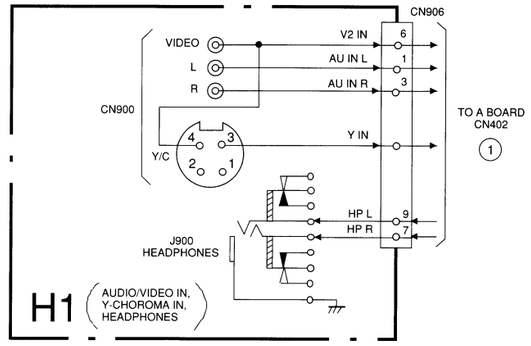
DIAGRAMS

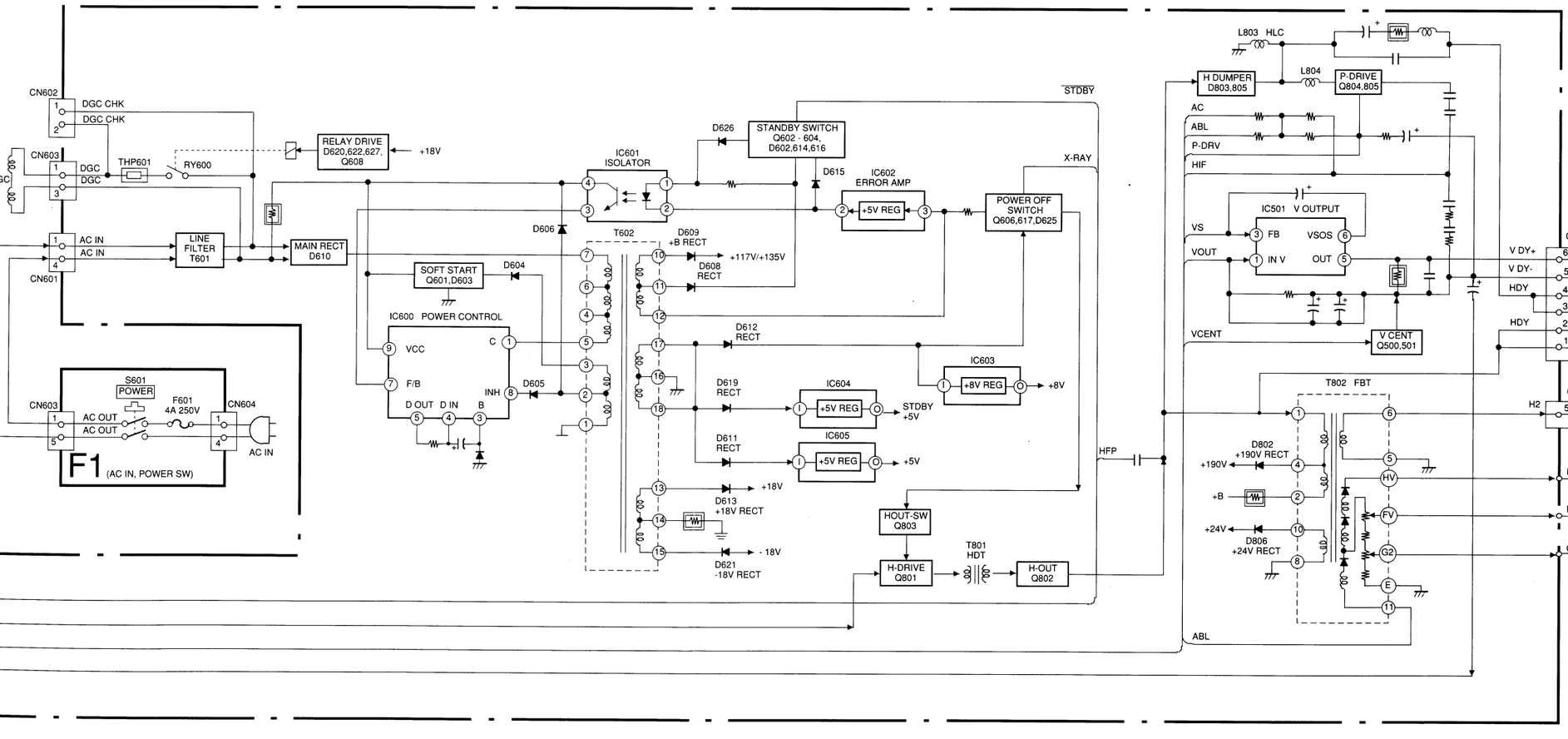
5-1. BLOCK DIAGRAM



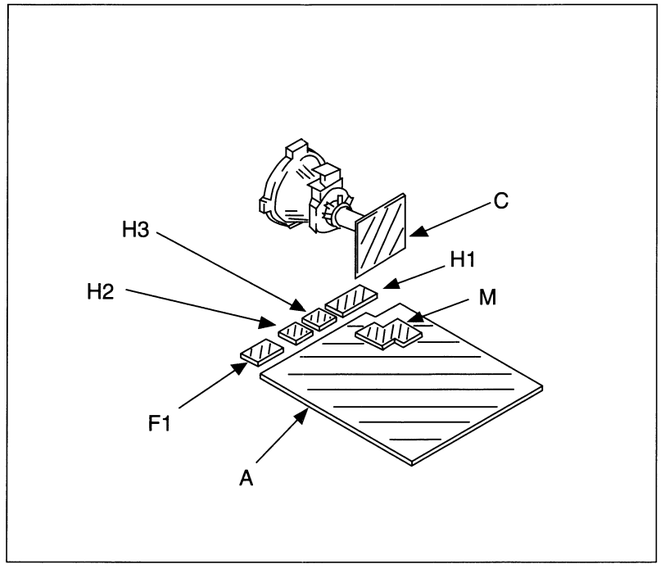

IC1004 EP ROM
IC003 MEMORY
IC1002 RGB DECODER/SYSTEM CONTROL
D0 - D7 A0 - A15
13-15-17-21
12-3-29-25-23
36-38-44
37-35-21
D7 - D0
A0 - A15
SDA
SCL
CN1001 (2/2)
VIDEO AMP Q310, 311
TV/VC SW Q312
SIRCS
LED
RST
AGC-MON
PROC-DIS
COIN
CVBS
TV/AV
AV1/AV2
S1
SW ADC
SCART
ITT RST
MUTE
XTAL2
XTAL1
TV/VC
R
G
B
VBLK
RGB P
BLK PULSE LOGIC Q002.015, Q118,Q307
BLANKING Q405-408
BUFFER Q402-404
D004
D003
BLANK
HBLK
X-RAY PROT
STDBY
X-RAY
VSYNC INT
VS
VCENT
HS
SCBLK
IC301 CRT DRIVER
R IN
G IN
B IN
V1 IN
FC
FB
R OUT
G OUT
B OUT
CUT-OFF Q301-306
VOUT
P-DRV
AC
BCL
HIF
VOJT
H OUT
HFP
V2 IN
NTSC
PAL/SCM
X301 14.318MHz
X302 17.472MHz
R-Y IN
B-Y IN
R-Y OUT
B-Y OUT
SYS
SSCP
IC302
DELAY LINE
CN081
CN402
Y IN
V2 IN
IC201
HP AMP
HP R
HP L
TO H1 BOARD CN906
AU IN L
AU IN R
IC1200
SPEAKER AMP
L OUT
R OUT
CN201
L
R
CNC71
CNC72
CNC73
TO A BOARD CN082
TO A BOARD T802 G2
R DRIVE,BKG Q703,706
G DRIVE,BKG Q702,705
B DRIVE,BKG Q701,704
R OUT Q709
G OUT Q708
B OUT Q707
IFB
H1
H2
RCV
G2
RV702 H. STAT
J701
V901 PICTURE TUBE
H
RCV
G2
G4
HV
TO A BOARD T802 HV
TO A BOARD T802 FV
C (RGB OUT)
CN900
VIDEO
L
R
Y/C
V2 IN
AU IN L
AU IN R
Y IN
HP L
HP R
J900 HEADPHONES
H1 (AUDIO/VIDEO IN, Y-CHOROMA IN, HEADPHONES)
CN602
DGC CHK
CN603
DGC
THP601
RY600
RELAY DRIVE D620,622,627, Q608
+18V
CN601
AC IN
LINE FILTER T601
MAIN RECT D610
S601 POWER
F601 4A 250V
CN604
F1 (AC IN, POWER SW)
IC601 ISOLATOR
D626
STANDBY SWITCH Q602 - 604, D602,614,616
D615
IC602 ERROR AMP
+5V REG
D606
T602
D609 +B RECT
+117V/+135V
D608 RECT
SOFT START Q601,D603
D604
IC600 POWER CONTROL
VCC
F/B
D OUT
D IN
INH
D605
D612 RECT
D619 RECT
IC604
STDBY +5V
D611 RECT
IC605
+5V
+18V
D613 +18V RECT
- 18V
D621 -18V RECT
HOUT-SW Q803
H-DRIVE Q801


CNC71
4 R
5 G
6 B
3 IFB
R DRIVE,BKG Q703,706
G DRIVE,BKG Q702,705
B DRIVE,BKG Q701,704
R OUT Q709
G OUT Q708
B OUT Q707
J701
10 R
9 G
8 B
V901 PICTURE TUBE
H
RCV
G2
G4
HV
H1 5
H2 6
RCV 13
G2 3
1
CNC72
BOARD CN082
5 H2
RV702
H. STAT
CNC73
BOARD T802 G2
1 G2
TO A BOARD T802 HV
TO A BOARD T802 FV
C (RGB OUT)


CN906
VIDEO
L
R
V2 IN 6
AU IN L 1
AU IN R 3
Y IN
CN900
Y/C
4 3
2 1
HP L 9
HP R 7
J900 HEADPHONES
TO A BOARD CN402
1
H1 (AUDIO/VIDEO IN, Y-CHOROMA IN, HEADPHONES)


CN602
1 DGC CHK
2 DGC CHK
CN603
1 DGC
DGC
3
THP601
RY600
RELAY DRIVE D620,622,627, Q608
+18V
IC601 ISOLATOR
D626
STANDBY SWITCH Q602 - 604, D602,614,616
D615
IC602 ERROR AMP
+5V REG
POWER OFF SWITCH Q606,617,D625
STDBY
X-RAY
D606
T602
D609 +B RECT
+117V/+135V
D608 RECT
1 AC IN
AC IN
4
CN601
LINE FILTER T601
MAIN RECT D610
SOFT START Q601,D603
D604
IC600 POWER CONTROL
9 VCC
C 1
7 F/B
INH 8
D605
D OUT D IN B
5 4 3
D612 RECT
IC603
+8V REG
+8V
D619 RECT
IC604
+5V REG
STDBY +5V
D611 RECT
IC605
+5V REG
+5V
+18V
D613 +18V RECT
- 18V
D621 -18V RECT
HOUT-SW Q803
H-DRIVE Q801
T801 HDT
H-OUT Q802
HFP
S601 POWER
CN603
AC OUT
AC OUT
5
F601 4A 250V
CN604
1
4
AC IN
F1 (AC IN, POWER SW)
L803 HLC
H DUMPER D803,805
L804
P-DRIVE Q804,805
AC
ABL
P-DRV
HIF
IC501 V OUTPUT
VS
3 FB
VSOS 6
VOUT
1 IN V
OUT 5
VCENT
V CENT Q500,501
T802 FBT
D802 +190V RECT
+190V
+B
+24V
D806 +24V RECT
HV
FV
G2
E
11
ABL
CN801
V DY+ 6
V DY- 5
HDY 4
3
HDY 2
1
VDY
HDY
DY ASSY
CN082
H2 5
TO C BOARD CNC72
HV
TO PICTURE TUBE (HV)
FV
TO PICTURE TUBE (G4)
G2
TO C BOARD CNC73

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- ⧧ : no mounted.

Note : The components identified by shading and marked ! are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ! sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

Reference information

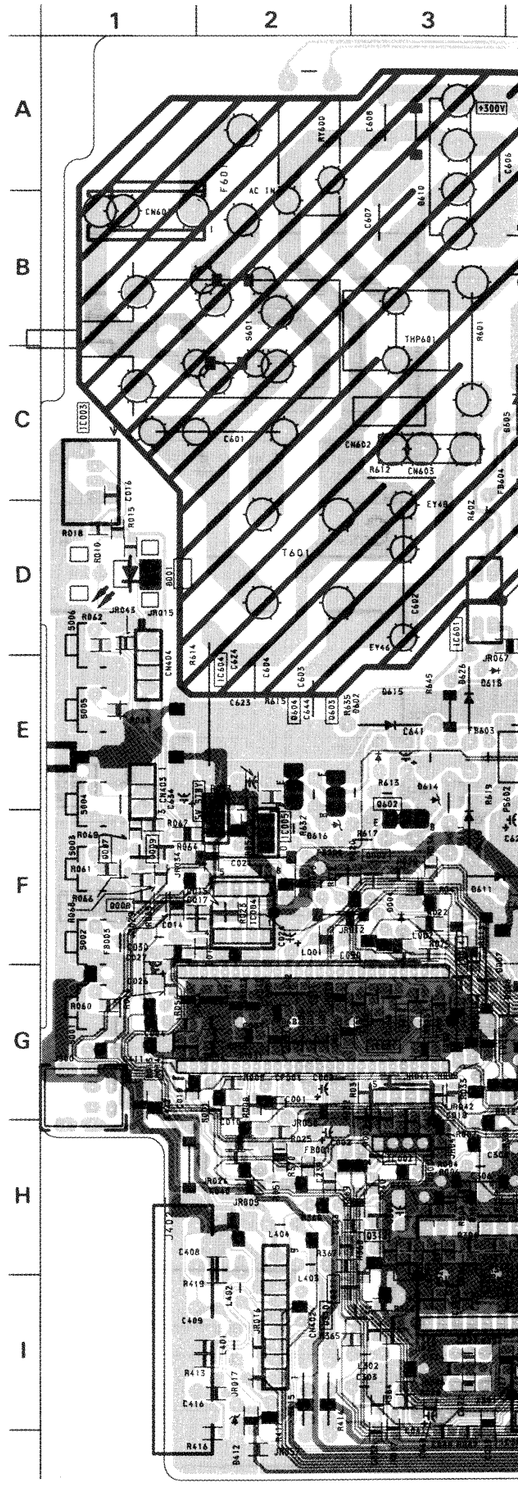
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- : signal path. (RF)

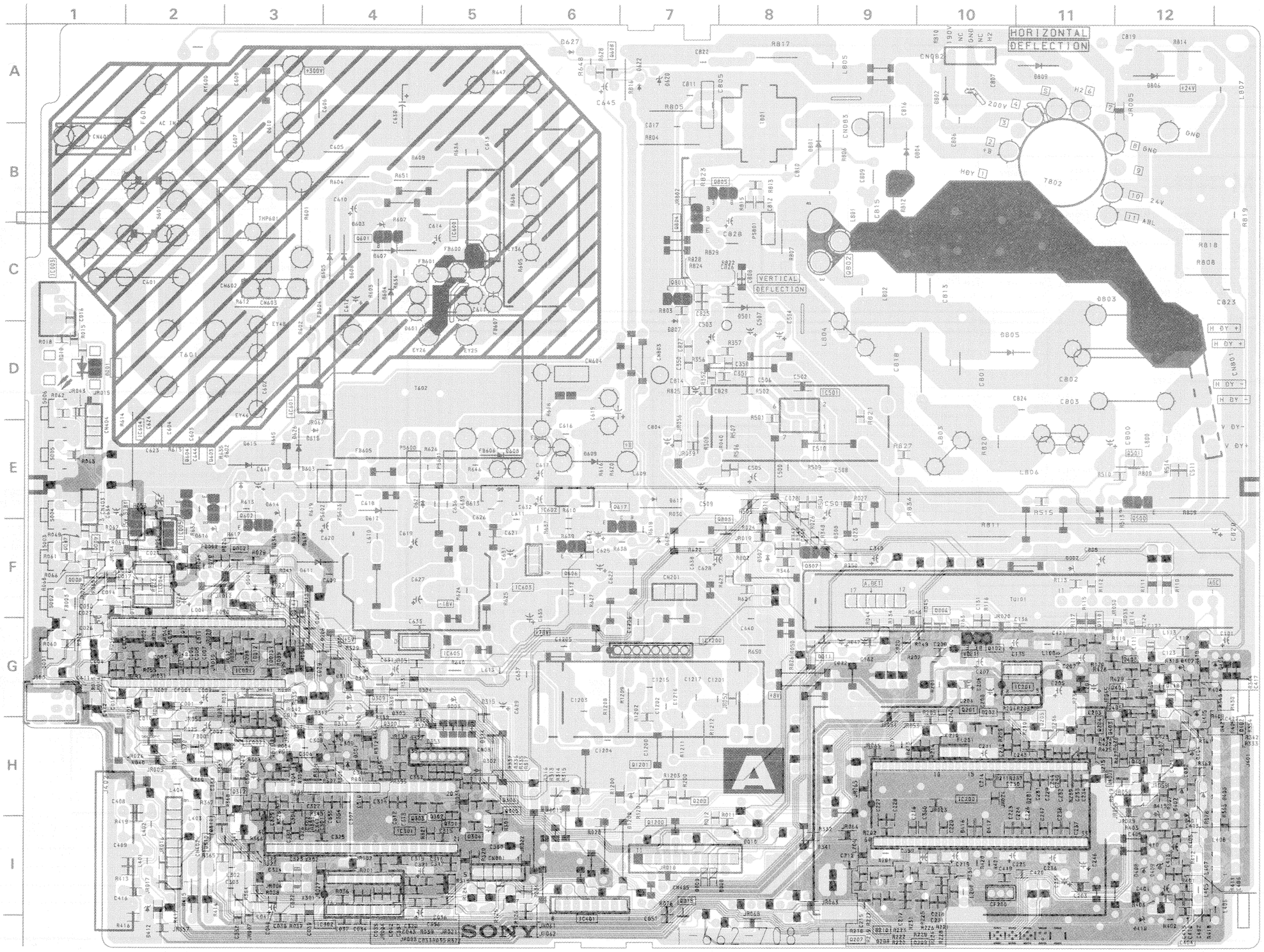
A BOARD

IC		DIODE	
IC003	C-1	D002	F-11
IC004	F-2	D003	G-5
IC005	F-2	D004	F-3
IC200	H-10	D005	G-4
IC201	G-11	D006	G-4
IC301	I-4	D007	G-3
IC302	J-4	D009	I-7
IC401	J-6	D011	E-8
IC501	D-9	D015	H-6
IC600	C-5	D201	H-11
IC601	D-3	D301	H-4
IC602	E-6	D302	H-5
IC603	F-6	D307	F-8
IC604	E-2	D308	F-9
IC605	G-5	D401	H-12
IC1200	G-7	D402	H-12
		D403	H-13
TRANSISTOR		D404	H-12
		D405	G-12
Q002	F-3	D406	G-3
Q006	F-10	D407	G-12
Q007	F-1	D408	I-12
Q008	F-1	D409	I-12
Q009	F-1	D410	I-12
Q011	G-9	D412	J-2
Q012	G-3	D415	H-12
Q013	G-3	D416	I-10
Q014	G-3	D417	I-10
Q015	I-7	D501	C-8
Q107	G-10	D602	E-3
Q110	F-11	D603	B-4
Q118	G-12	D604	C-4
Q200	H-7	D605	C-5
Q201	G-10	D606	C-4
Q202	G-10	D607	C-4
Q204	H-11	D608	E-5
Q205	G-11	D609	E-6
Q207	J-9	D610	A-3
Q208	J-9	D611	F-3
Q209	J-10	D612	F-4
Q210	J-9	D613	E-5
Q300	H-4	D614	F-3
Q301	I-5	D615	E-3
Q302	I-5	D616	F-2
Q303	I-5	D617	E-7
Q304	I-5	D619	F-3
Q305	H-5	D620	A-7
Q306	H-5	D621	E-4
Q307	F-8	D622	A-7
Q310	I-2	D625	F-7
Q311	I-2	D626	E-3
Q312	H-3	D627	A-6
Q402	G-13	D801	B-9
Q403	H-12	D802	A-10
Q404	H-12	D803	F-8
Q405	G-12	D805	D-10
Q406	G-12	D806	A-12
Q407	H-12	D807	C-7
Q408	G-12	D809	A-11
Q500	E-12	D1200	I-7
Q501	E-12		
Q601	C-4		
Q602	F-3		
Q603	E-2		
Q604	E-2		
Q606	F-6		
Q608	A-6		
Q617	E-7		
Q801	C-7		
Q802	C-9		
Q803	F-8		
Q804	B-7		
Q805	B-8		
Q1200	I-7		
Q1201	H-7		

A Board



A Board



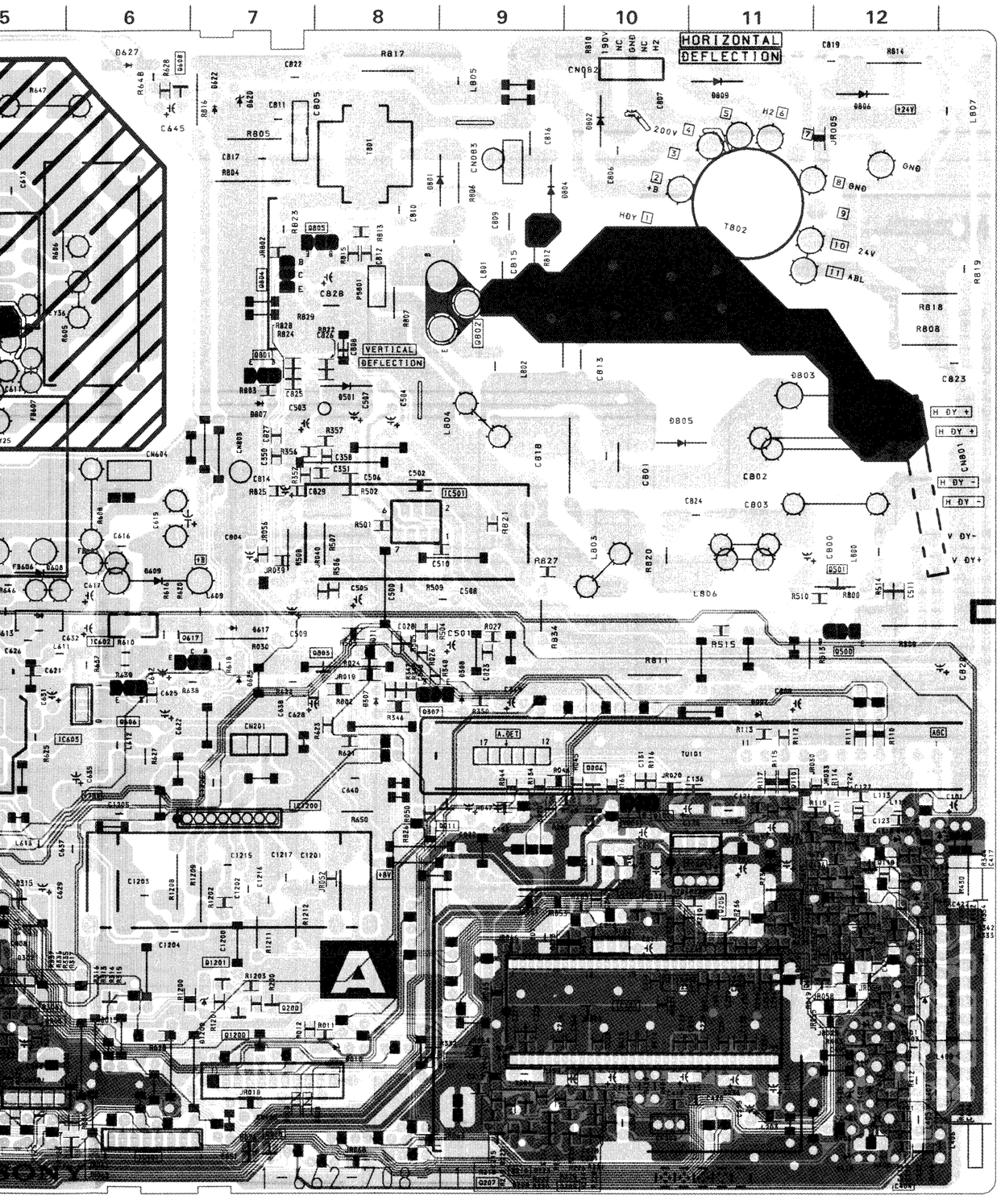
BOARD

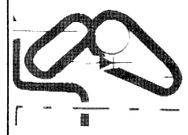
IC		DIODE	
IC003	C-1	D002	F-11
IC004	F-2	D003	G-5
IC005	F-2	D004	F-3
IC200	H-10	D005	G-4
IC201	G-11	D006	G-4
IC301	I-4	D007	G-3
IC302	J-4	D009	I-7
IC401	J-6	D011	E-8
IC501	D-9	D015	H-6
IC600	C-5	D201	H-11
IC601	D-3	D301	H-4
IC602	E-6	D302	H-5
IC603	F-6	D307	F-8
IC604	E-2	D308	F-9
IC605	G-5	D401	H-12
IC1200	G-7	D402	H-12
		D403	H-13
TRANSISTOR		D404	H-12
		D405	G-12
Q002	F-3	D406	G-3
Q006	F-10	D407	G-12
Q007	F-1	D408	I-12
Q008	F-1	D409	I-12
Q009	F-1	D410	I-12
Q011	G-9	D412	J-2
Q012	G-3	D415	H-12
Q013	G-3	D416	I-10
Q014	G-3	D417	I-10
Q015	I-7	D501	C-8
Q107	G-10	D602	E-3
Q110	F-11	D603	B-4
Q118	G-12	D604	C-4
Q200	H-7	D605	C-5
Q201	G-10	D606	C-4
Q202	G-10	D607	C-4
Q204	H-11	D608	E-5
Q205	G-11	D609	E-6
Q207	J-9	D610	A-3
Q208	J-9	D611	F-3
Q209	J-10	D612	F-4
Q210	J-9	D613	E-5
Q300	H-4	D614	F-3
Q301	I-5	D615	E-3
Q302	I-5	D616	F-2
Q303	I-5	D617	E-7
Q304	I-5	D619	F-3
Q305	H-5	D620	A-7
Q306	H-5	D621	E-4
Q307	F-8	D622	A-7
Q310	I-2	D625	F-7
Q311	I-2	D626	E-3
Q312	H-3	D627	A-6
Q402	G-13	D801	B-9
Q403	H-12	D802	A-10
Q404	H-12	D803	F-8
Q405	G-12	D805	D-10
Q406	G-12	D806	A-12
Q407	H-12	D807	C-7
Q408	G-12	D809	A-11
Q500	E-12	D1200	I-7
Q501	E-12		
Q601	C-4		
Q602	F-3		
Q603	E-2		
Q604	E-2		
Q606	F-6		
Q608	A-6		
Q617	E-7		
Q801	C-7		
Q802	C-9		
Q803	F-8		
Q804	B-7		
Q805	B-8		
Q1200	I-7		
Q1201	H-7		

NOT
The
600
inspe

A BOARD * MARK

Ref. No \ Model	21X1A	
C215	—	
C349	—	
IC200	MSP3400C-PP-C6	M
R332	68K	
R357	68K	
TU101	TUVIF (AEP)	





NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A BOARD TRANSISTOR TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q002	-	5.0	-
Q006	4.6	0.7	4.8
Q007	-	5.0	0
Q008	5.0	5.0	4.5
Q009	0.1	5.0	4.5
Q011	0.6	5.0	0
Q012	-	5.0	-
Q013	-	5.0	-
Q014	-	5.0	-
Q110	4.6	8.0	4.0
Q118	-	-	0
Q201	-	-	0
Q202	-	-	0
Q204	4.7	8.0	4.0
Q205	4.6	8.0	4.0
Q210	3.5	8.0	2.9
Q300	0.3	0.6	0
Q301	0	2.0	0
Q302	0	2.1	0
Q303	0	2.2	0
Q304	0	2.0	0
Q305	0	2.1	0
Q306	0	2.2	0
Q310	1.7	5.0	3.0
Q311	3.6	5.0	3.0
Q312	-0.2	-	0
Q403	-	-	-
Q404	-	-	-
Q500	5.4	19.7	4.8
Q501	0.6	5.4	0
Q601	-0.3	-2.2	-2.6
Q602	68.0	8.0	68.4
Q603	0	67.7	0
Q604	0.6	0	0
Q608	-	15.8	0
Q801	0	120	0
Q802	-0.2	120	0
Q803	0.1	0.6	0
Q804	0.5	16.0	-
Q805	1.0	16.0	0.5
Q1201	3.5	7.0	2.8

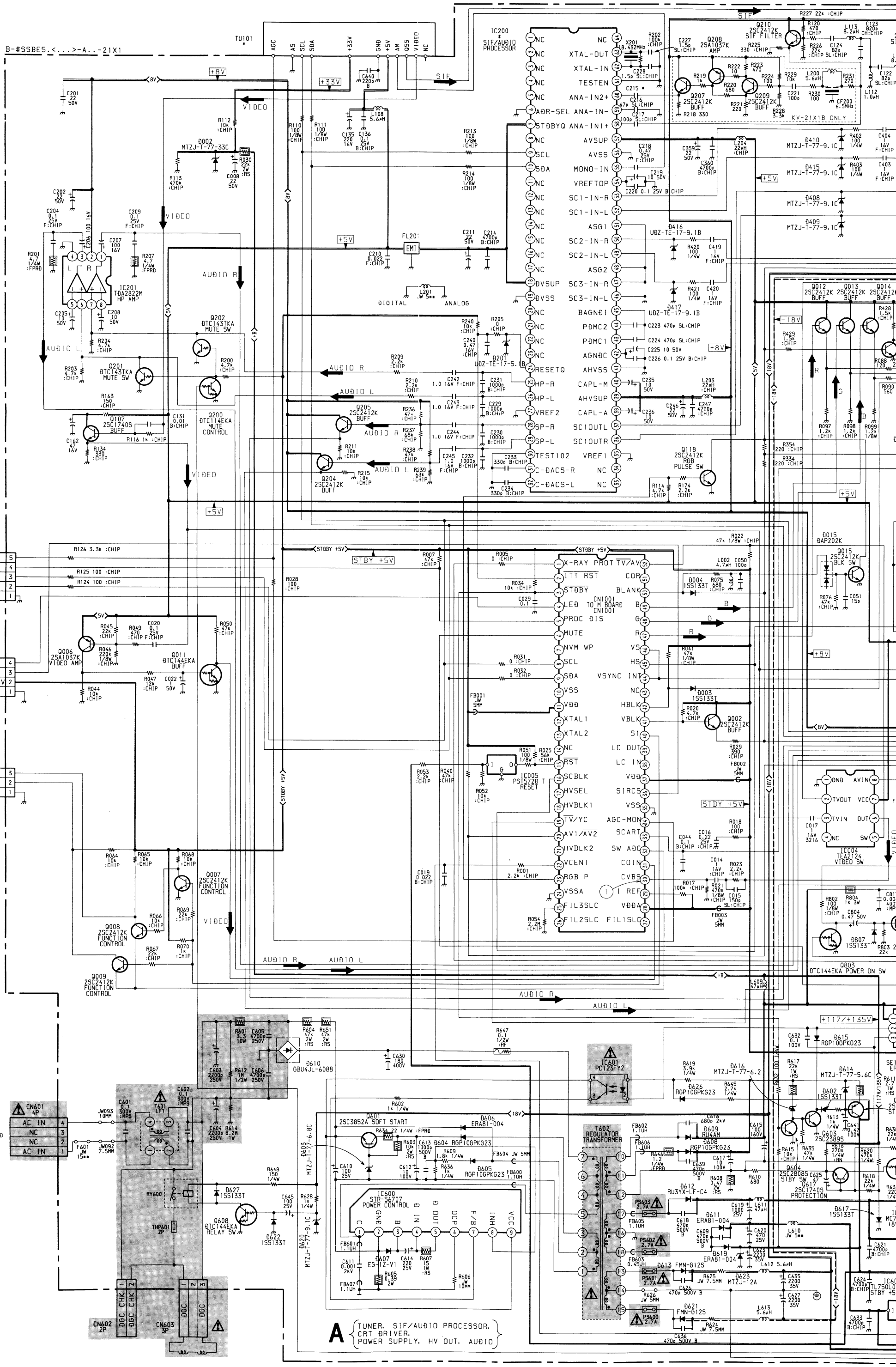
IC Voltage Table

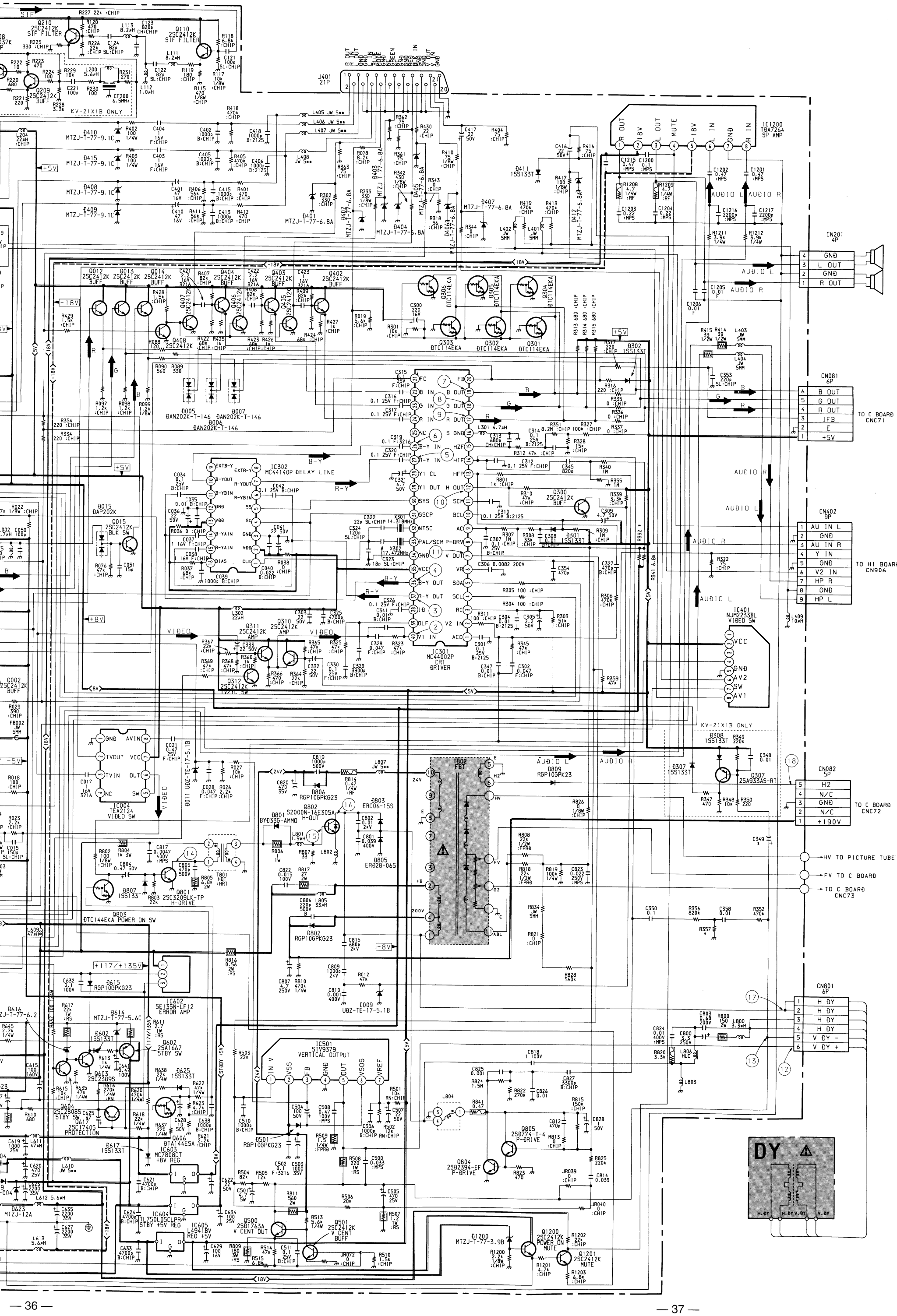
Ref No	Pin No	Voltage (V)
IC004	2	2.0
	3	2.2
	6	1.9
	7	5.0
	8	1.8
IC200	7	4.8
	9	3.1
	10	3.1
	18	4.8
	24	4.5
	31-32	3.8
	36-37	3.8
	38	7.0
	39	8.0
	40	7.0
	42-45	3.8
	49-50	3.8
	52-53	3.8
	54	2.6
	55	3.8
	57	4.8
	58-59	1.5
	62-63	2.4
IC201	1	3.5
	2	8.0
	3	3.5
	5	0.5
	8	0.5
IC301	1	1.6
	2	0.8
	3	1.3
	4-5	3.3
	6	0.9
	7	1.5
	8	1.0
	9	1.3
	10	2.3
	11	1.6
	12	0.3
	13	0.4
	14	1.0
	15	2.1
	17-19	2.4
	20	3.1
	22-23	3.0
	24	2.9
	26-27	3.1
	28	1.0
	31	1.3
	32-33	1.8
	35	4.7
	36	2.5
	37	2.4
	38	0.8
	39	3.0
	40	2.8

Ref No	Pin No	Voltage (V)
IC302	1	1.6
	2	4.7
	4	1.3
	6-7	1.4
	8	0.2
	10-11	1.4
	13	4.7
	14-15	1.1
	16	1.6
IC401	4	2.1
	6	3.0
	7	2.7
	8	3.0
IC501	2	28.3
	3	1.4
	5	20.0
	6	28.6
	7	2.6
IC1200	2	15.8
	4	7.0
	5	-16.0

A BOARD * MARK

Ref. No \ Model	21X1A	21X1B	21X1D	21X1E	21X1K	21X1L	21X1R	21X1U
C215	—	100PF	—	—	—	—	—	—
C349	—	22UF/50V	—	—	—	—	—	—
IC200	MSP3400C-PP-C6	MSP3410B-PP-F7	MSP3400C-PP-C6	MSP3410B-PP-F7	MSP3400C-PP-C6	MSP3410B-PP-F7	MSP3400C-PP-C6	MSP3410B-PP-F7
R332	68K	68K	47K	68K	47K	47K	47K	47K
R357	68K	68K	47K	68K	47K	47K	47K	47K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)

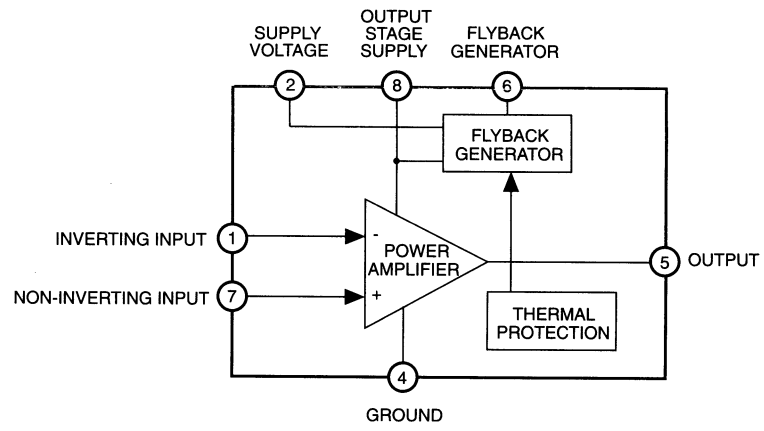

1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O P
B-#SSBE5.<...>-A..-21X1
TU101
AGC AS SCL SDA +33V GND +5V AM QSS VIDEO NC
IC200 * SIF/AUDIO PROCESSOR
NC XTAL-OUT XTAL-IN TESTEN ANA-IN2+ ADR-SEL ANA-IN- STDBYQ ANA-IN1+ AVSUP AVSS MONO-IN VREFTOP SC1-IN-R SC1-IN-L ASG1 SC2-IN-R SC2-IN-L ASG2 SC3-IN-R SC3-IN-L BAGNDI PDMC2 PDMC1 AGNDC AHVSS CAPL-M AHVSUP CAPL-A SC1OUTL SC1OUTR VREF1 NC NC RESETQ HP-R HP-L VREF2 SP-R SP-L TEST102 C-DACS-R C-DACS-L
X201 18.432MHz
SIF
Q210 2SC2412K SIF FILTER
Q208 2SA1037K AMP
Q207 2SC2412K BUFF
Q209 2SC2412K BUFF
KV-21X1B ONLY
VIDEO
AUDIO R
AUDIO L
DIGITAL
ANALOG
IC201 TDA2822M HP AMP
Q202 DTC143TKA MUTE SW
Q201 DTC143TKA MUTE SW
Q200 DTC114EKA MUTE CONTROL
Q107 2SC1740S BUFF
Q205 2SC2412K BUFF
Q204 2SC2412K BUFF
Q207 UDZ-TE-17-5.1B
Q118 2SC2412K RGB PULSE SW
Q012 2SC2412K BUFF
Q013 2SC2412K BUFF
Q014 2SC2412K BUFF
D002 MTZJ-T-77-33C
D410 MTZJ-T-77-9.1C
D415 MTZJ-T-77-9.1C
D408 MTZJ-T-77-9.1C
D409 MTZJ-T-77-9.1C
D416 UDZ-TE-17-9.1B
D417 UDZ-TE-17-9.1B
FL201 EMI
L201 JW 5mm
CN001 5P
AGC CS SDA SCL GND
SERVICE CONNECTOR
CN404 4P
RESP SIRCS STBY +5V GND
TO H2 BOARD CN907
CN403 3P
KEY1 KEY2 GND
TO H3 BOARD CN908
Q006 2SA1037K VIDEO AMP
Q011 DTC144EKA BUFF
Q007 2SC2412K FUNCTION CONTROL
Q008 2SC2412K FUNCTION CONTROL
Q009 2SC2412K FUNCTION CONTROL
STBY +5V
IC001 X-RAY PROT TV/AV ITT RST STDBY LED PROC DIS MUTE NVM WP SCL SDA VSS VDD XTAL1 XTAL2 NC RST SCBLK HVSEL HVBLK1 TV/YC AV1/AV2 HVBLK2 VCENT RGB P VSSA FIL3SLC FIL2SLC COR BLANK B G R VS HS VSYNC INT NC HBLK VBLK S1 LC OUT LC IN VDD SIRCS VSS AGC-MON SCART SW ADC COIN CVBS I REF VDDA FIL1SLC
CN1001 TO M BOARD CN1001
IC005 PST5720D-T RESET
IC004 TEA2124 VIDEO SW
Q002 2SC2412K BUFF
Q003 1SS133T
D004 1SS133T
Q015 2SC2412K BLK SW
D015 DAP202K
Q803 DTC144EKA POWER ON SW
CN601 4P
AC IN NC NC AC IN
TO F1 BOARD CN604
CN602 2P
CN603 3P
IC600 STR-S6707 POWER CONTROL
IC601 PC123FY2
Q601 2SC3852A SOFT START
Q608 DTC144EKA RELAY SW
T601 LFT
T602 REGULATOR TRANSFORMER
D610 GBU4JL-6088
D606 ERA81-004
D611 ERA81-004
D619 ERA81-004
D612 RU3YX-LF-C4
D613 FMN-G12S
D621 FMN-G12S
D623 MTZJ-12A
D615 RGP10GPKG23
D616 MTZJ-T-77-6.2
D614 MTZJ-T-77-5.6C
D602 1SS133T
D603 MTZJ-T-77-6.8C
D620 MTZJ-T-77-9.1C
D604 RGP10GPKG23
D605 RGP10GPKG23
D608 RGP10GPKG23
D609 RU4AM
D622 1SS133T
D627 1SS133T
D617 1SS133T
RY600
THP601 2P
A TUNER, SIF/AUDIO PROCESSOR, CRT DRIVER, POWER SUPPLY, HV OUT, AUDIO


SIF
Q210 2SC2412K SIF FILTER
Q110 2SC2412K SIF FILTER
Q209 2SC2412K BUFF
KV-21X1B ONLY
J401 21P
IC1200 TDA7264 SP AMP
R OUT
18V
L OUT
MUTE
-18V
L IN
GND
R IN
AUDIO L
AUDIO R
CN201 4P
GND
L OUT
R OUT
CN081 6P
B OUT
G OUT
R OUT
IFB
E
+5V
TO C BOARD CNC71
IC302 MC44140P DELAY LINE
IC301 MC44002P CRT DRIVER
IC401 NJM2233BL VIDEO SW
CN402 9P
AU IN L
AU IN R
Y IN
V2 IN
HP R
HP L
TO H1 BOARD CN906
VIDEO
IC004 TEA2124 VIDEO SW
IC602 SE135N-LF12 ERROR AMP
IC603 MC7808CT +8V REG
IC604 TL750L05CLPR STBY +5V REG
IC605 L4941BV REG +5V
IC501 STV9379 VERTICAL OUTPUT
Q803 DTC144EKA POWER ON SW
Q805 2SD774-T-4 P-DRIVE
Q804 2SD2394-EF P-DRIVE
Q1200 2SC2412K POWER ON MUTE
Q1201 2SC2412K MUTE
Q307 2SA933AS-RT
CN082 5P
H2
N/C
GND
N/C
+190V
TO C BOARD CNC72
HV TO PICTURE TUBE
FV TO C BOARD
TO C BOARD CNC73
CN801 6P
H DY
H DY
H DY
H DY
V DY -
V DY +
DY
H.DY
H.DY V.DY
V.DY

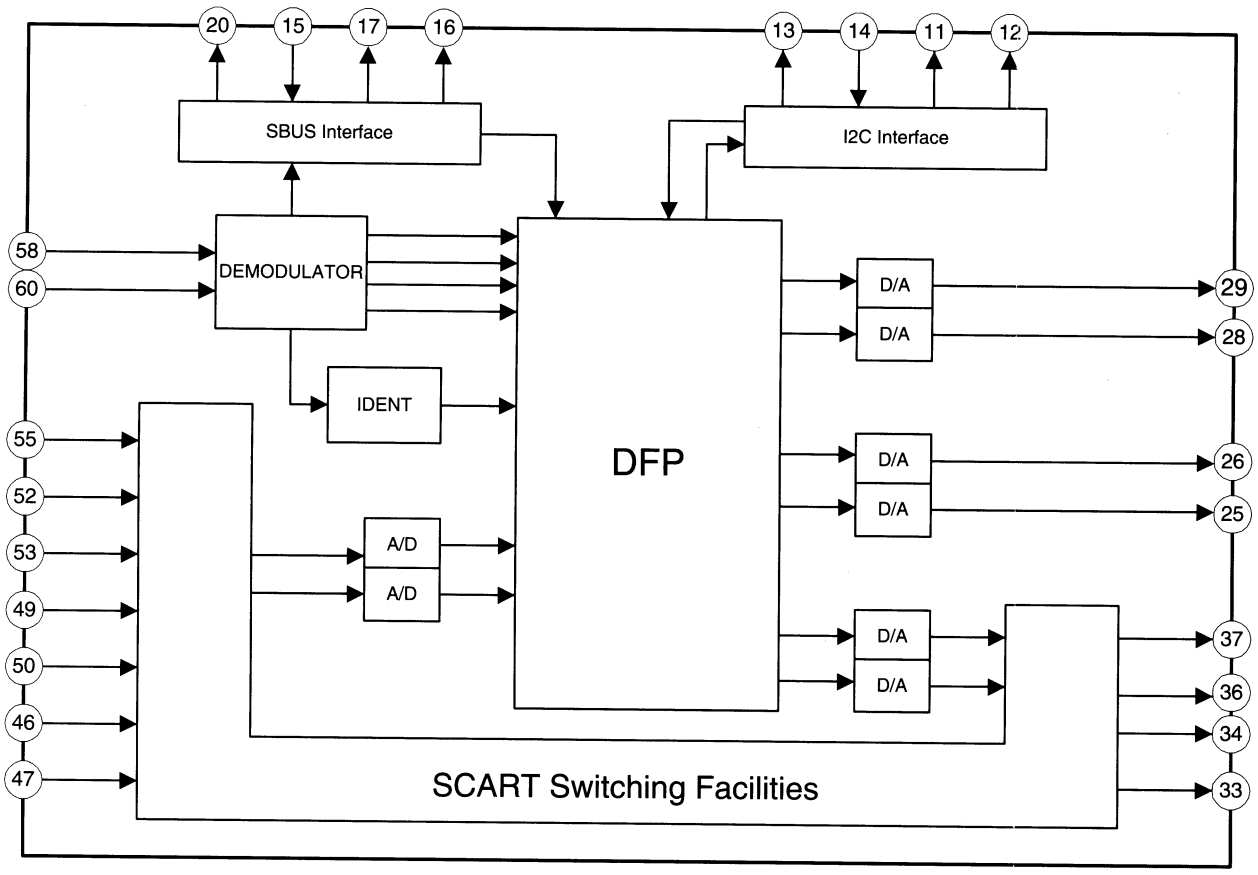
WAVEFORMS A BOARD

① 2.0 Vp-p (H)	② 1.0 Vp-p (H)	③ 1.0 Vp-p (H)	④ PAL 1.0 Vp-p (H)	④ SECAM/NTSC 1.2 Vp-p (H)
⑤ PAL 1.0 Vp-p (H)	⑤ SECAM 0.5 Vp-p (H)	⑤ NTSC 1.1 Vp-p (H)	⑥ PAL 1.4 Vp-p (H)	⑥ SECAM 0.7 Vp-p (H)
⑥ NTSC 1.5 Vp-p (H)	⑦ 2.0 Vp-p (H)	⑧ 2.3 Vp-p (H)	⑨ 2.3 Vp-p (H)	⑩ 0.8 Vp-p (H)
⑪ 1.8 Vp-p (H)	⑫ 55 Vp-p (H)	⑬ 8.4 Vp-p (H)	⑭ 220 Vp-p (H)	⑮ 10 Vp-p (H)
⑯ 1.4KVp-p (H)	⑰ 210 Vp-p (H)	⑱ 24 Vp-p (H)		

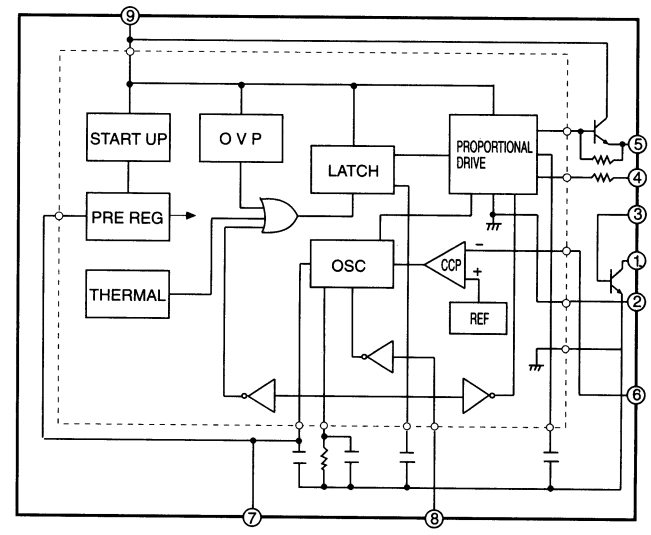
A BOARD IC501 STV9379



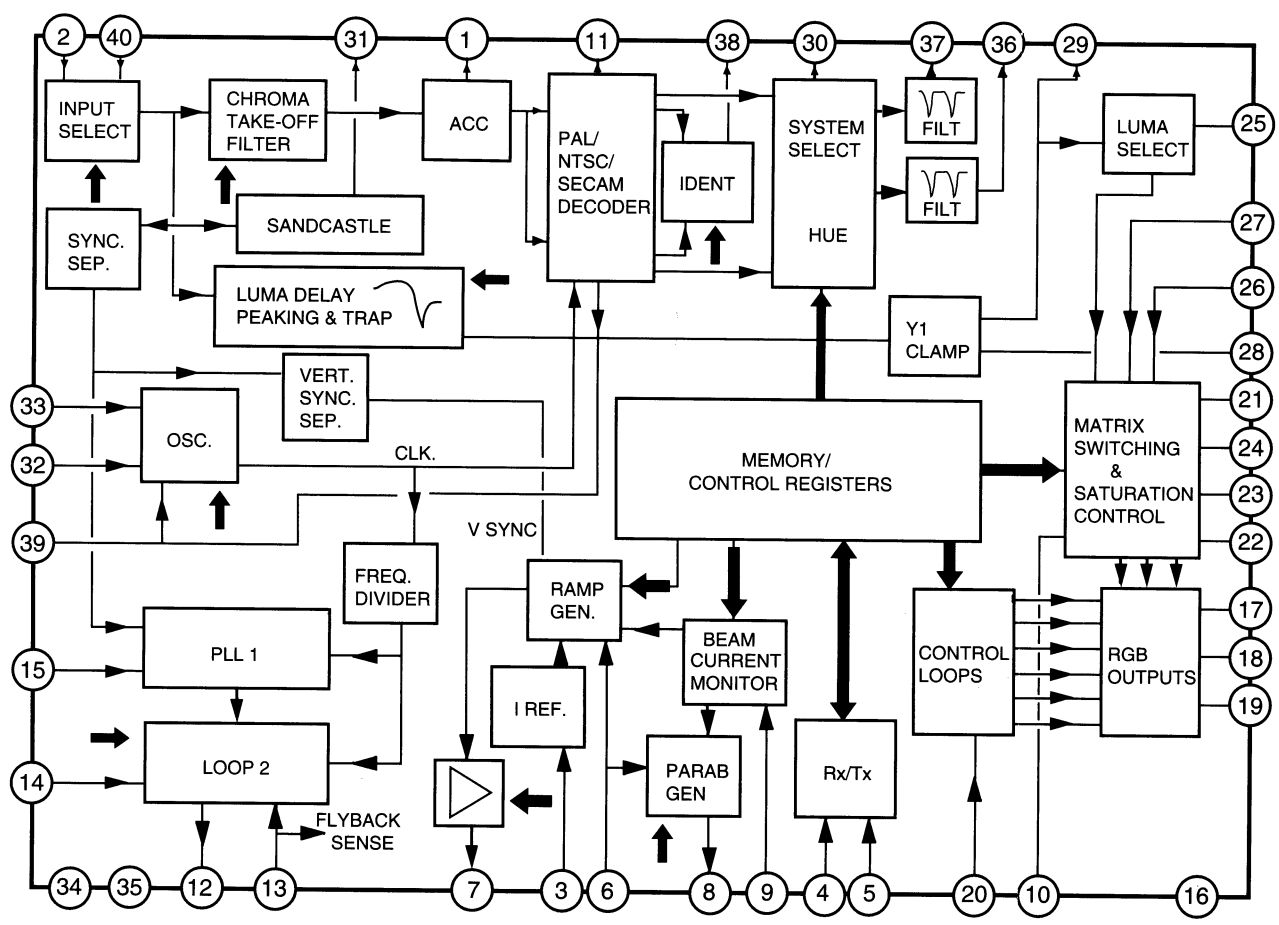
A BOARD IC200 MSP3400C-PP-C6/MSP3410B-PP-F7



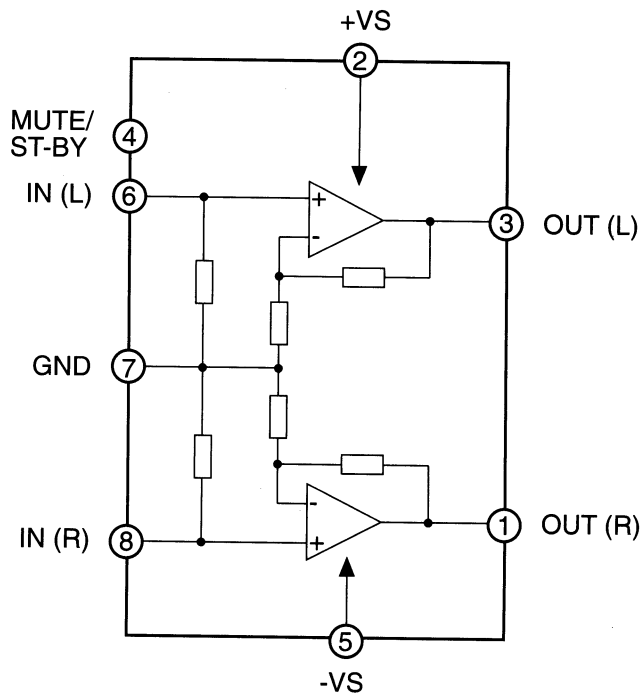
A BOARD IC600 STR-S6707



A BOARD IC301 MC44002P

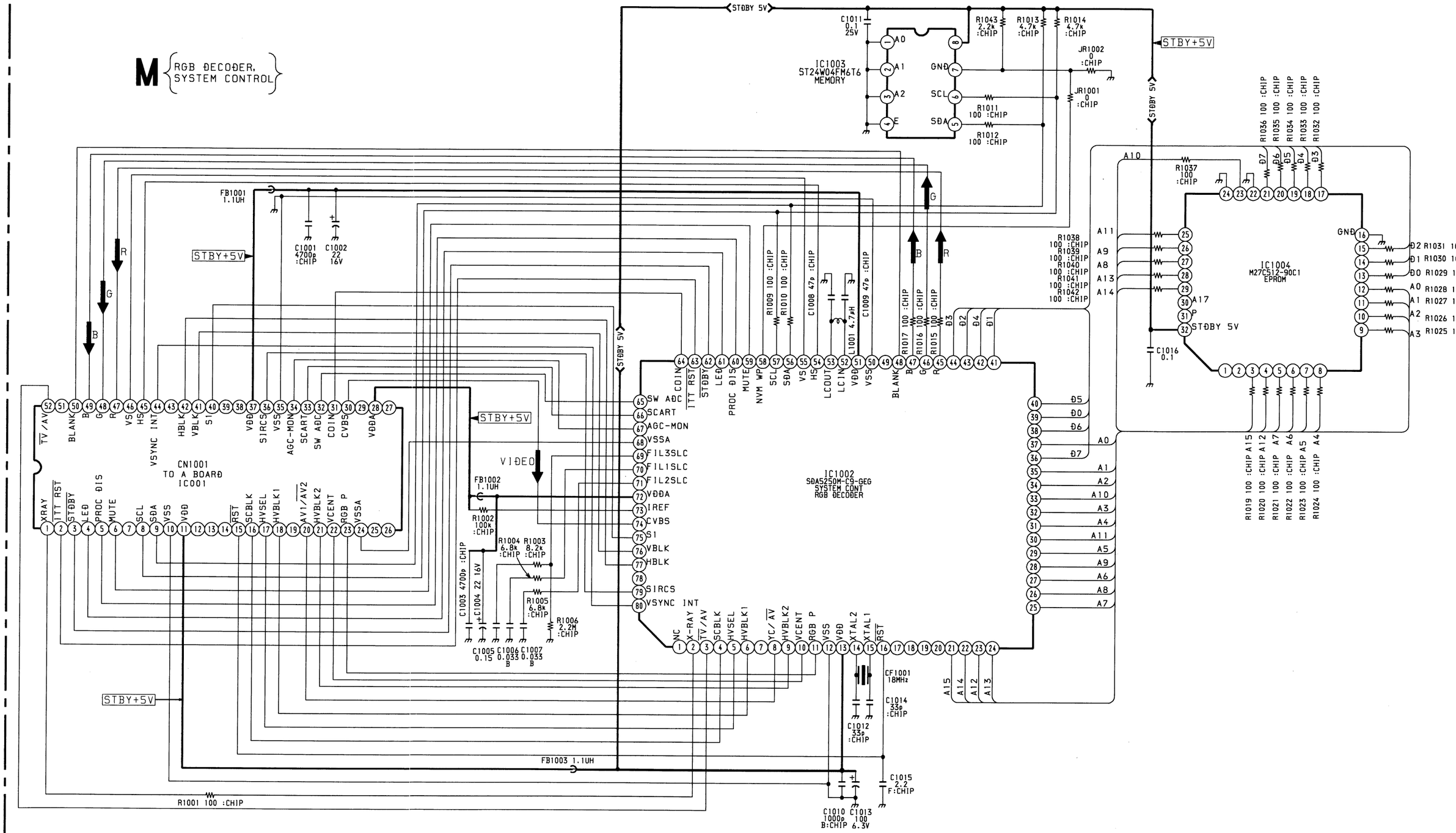


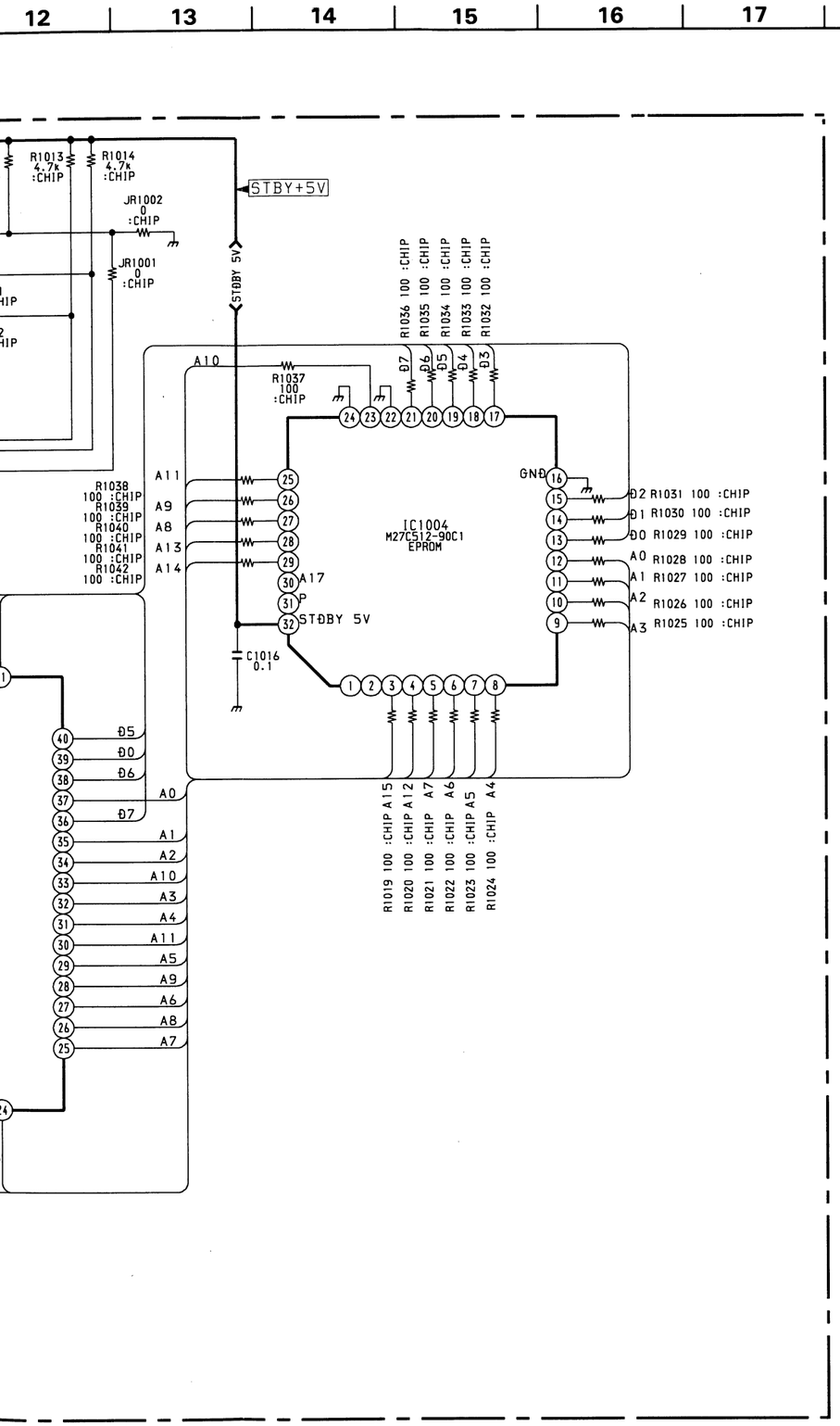
A BOARD IC1200 TDA7264



B-#SSBE5.<...>-M...-21X1

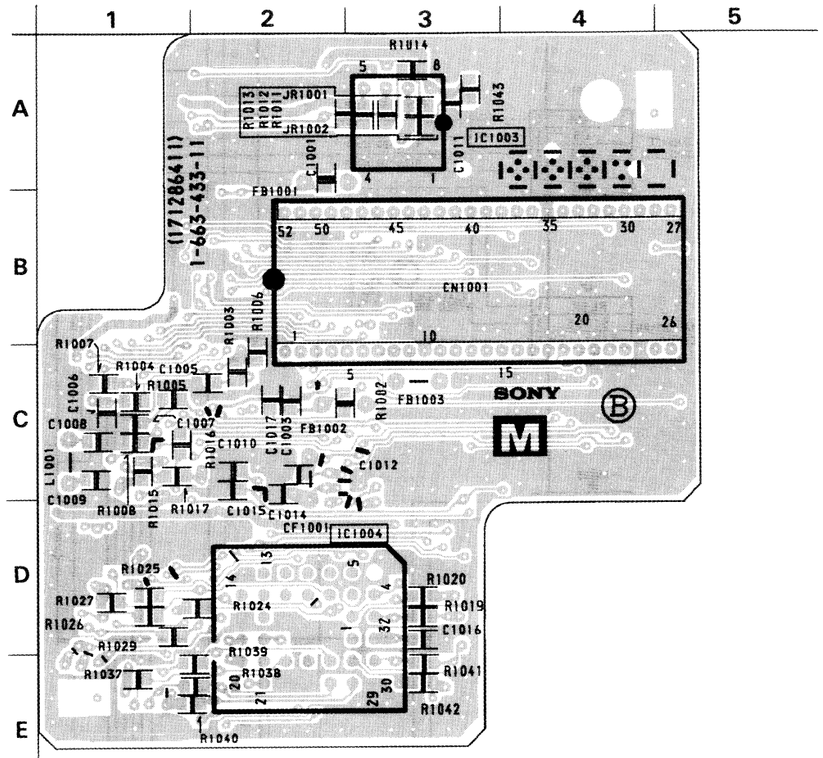
M RGB ĐECOĐER, SYSTEM CONTROL



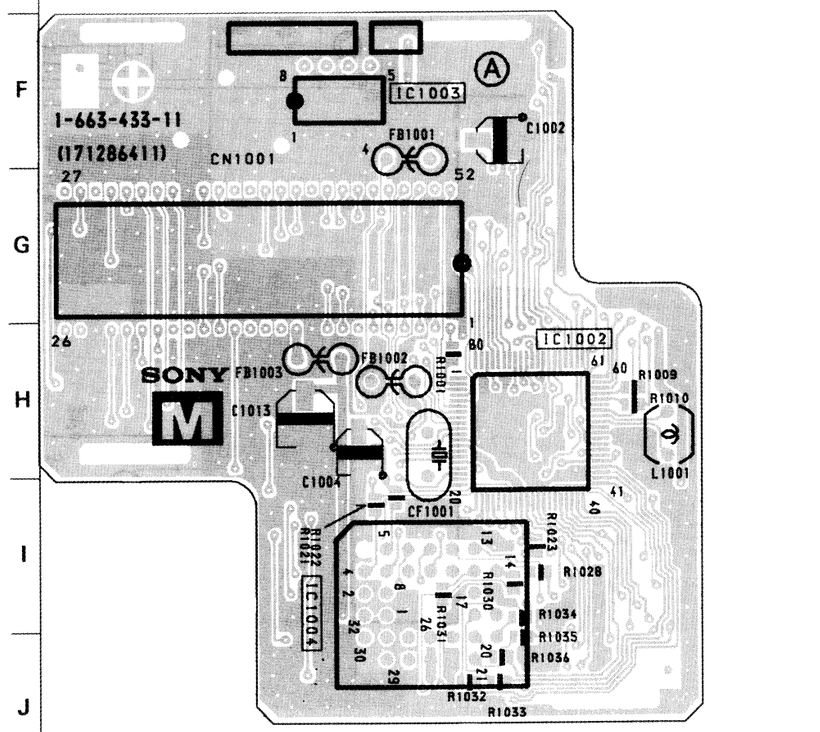


M RGB DECODER, SYSTEM CONTROL

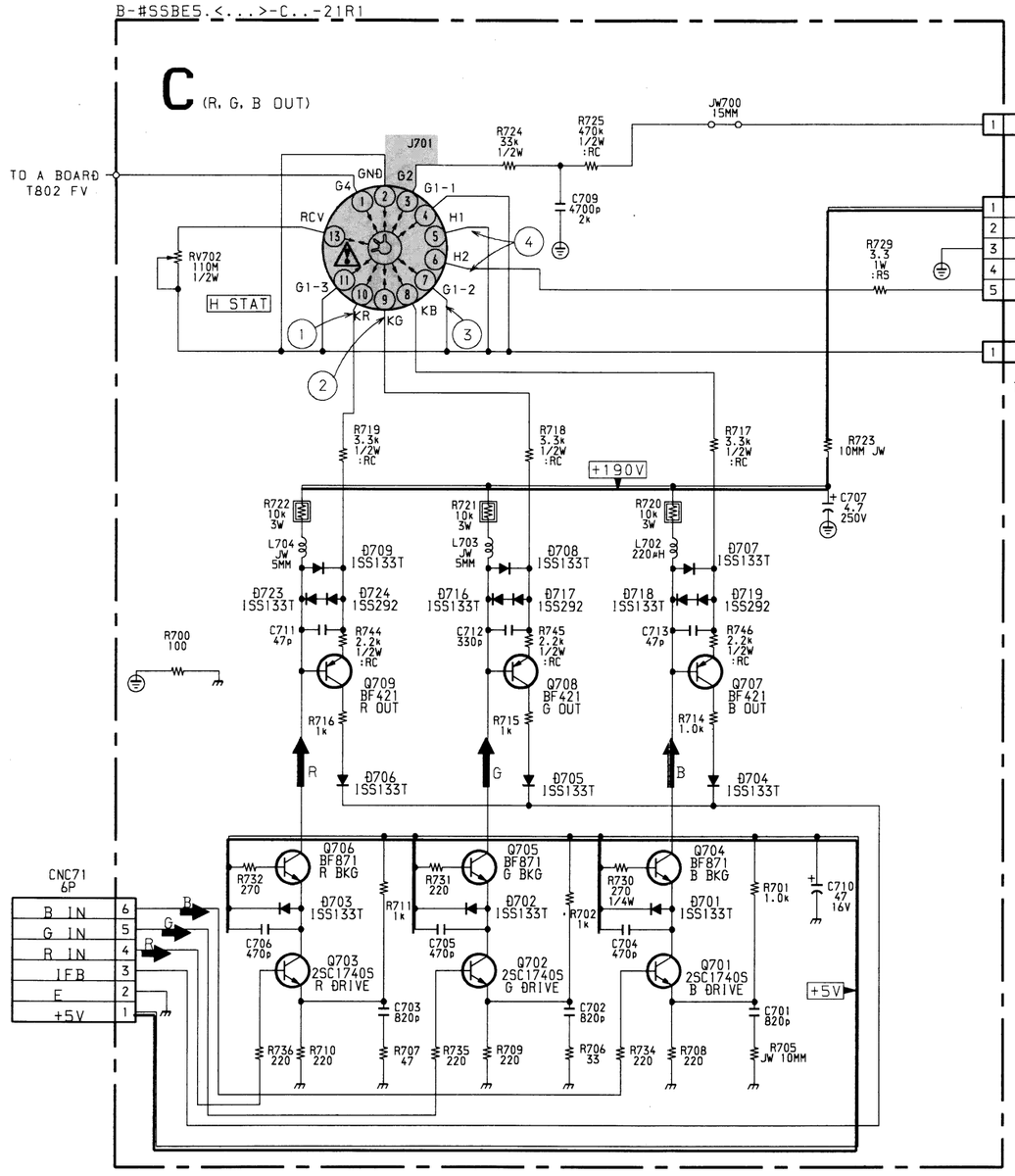
M Board < Conductor Side >



M Board < Component Side >



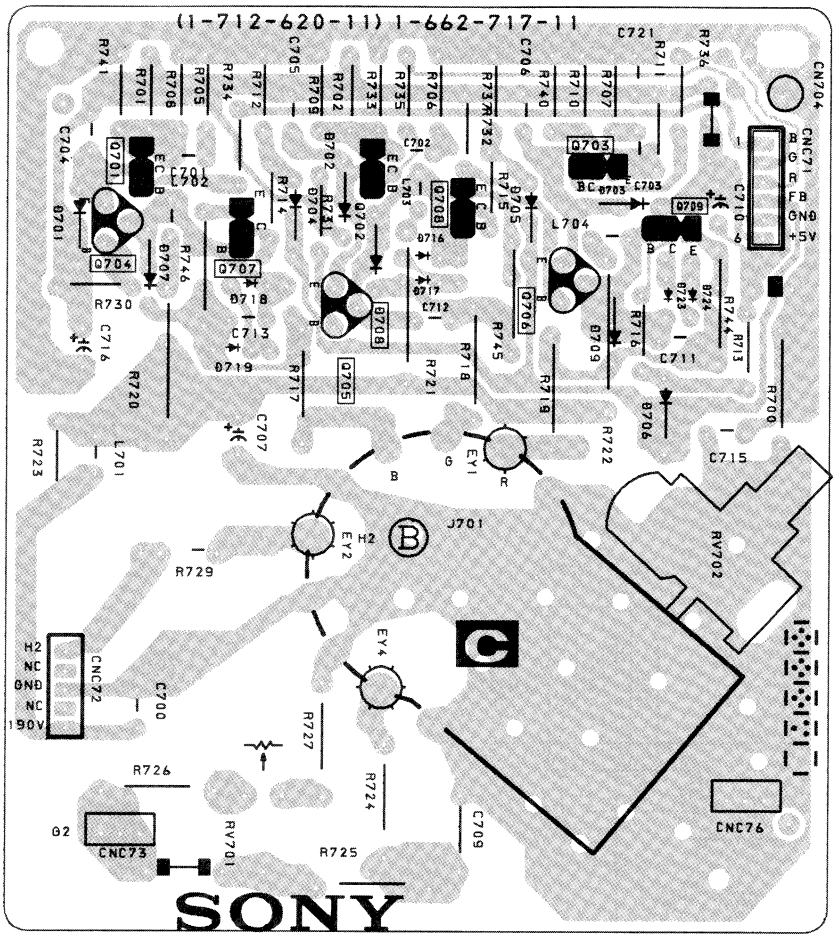
B-#SSBE5.<...>-C..-21R1



WAVEFORMS C BOARD

① 100 Vp-p (H)	② 96 Vp-p (H)
③ 85 Vp-p (H)	④ 23 Vp-p (H)

C Board

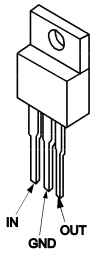


C BOARD
TRANSISTOR VOLTAGE TABLE

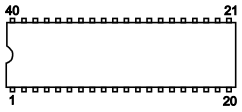
Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q701	2.5	4.3	1.8
Q702	2.5	4.3	1.8
Q703	2.3	4.3	1.7
Q704	5.0	144.8	4.3
Q705	5.0	149.2	4.3
Q706	5.0	152.3	4.3
Q707	144.8	3.5	152.3
Q708	149.2	3.5	149.2
Q709	151.7	3.5	172.1

5-4. SEMICONDUCTORS

L4941BV
LM78080CT
MC7808CT
TEA7605
TL750L05CLPR

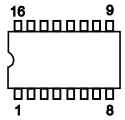


MC44002P



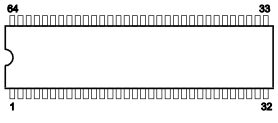
(TOP VIEW)

MC44140P



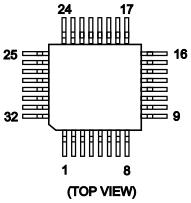
(TOP VIEW)

MSP3400C-PP-C6
MSP3410B-PP-F7



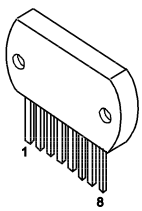
(TOP VIEW)

M27C512-90C1-BE5-1

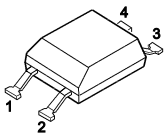


(TOP VIEW)

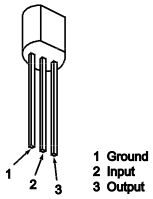
NJM2233BL



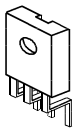
PC123F2
PC123FY2



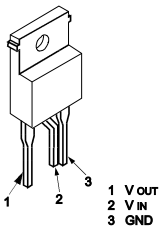
PST572D
PST572D-T



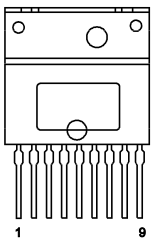
SBX1981-51



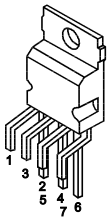
SE-135N
SE135N-LF12



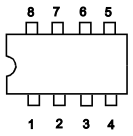
STR-S6707



STV9379

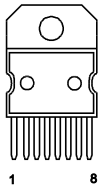


TDA2822M
TEA2124

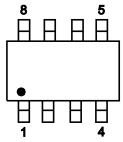


(TOP VIEW)

TDA7264

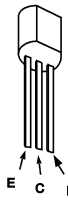


ST24W04FB6

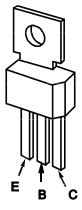


(TOP VIEW)

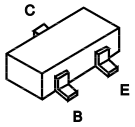
BF421-AMMO
2SA1091-O



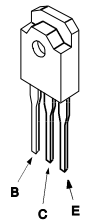
BF871-127



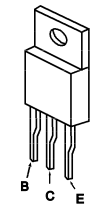
DTA144ESA
DTA144ESA-TP
DTC114EK
DTC114EKA-T146
DTC143TKA-T146
DTC144EKA-T146
2SA1037K-T-146-R
2SA1162-G
2SC2412K-QR
2SC2412K-T-146-R



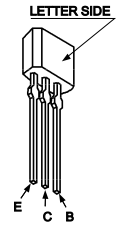
S2000N-16E305A



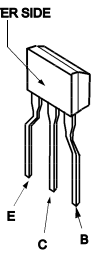
2SA1667
2SC3852A
2SD2394-EF



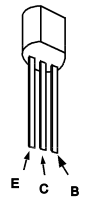
2SA933AS-QRT
2SA933AS-RT
2SC1740S-RT



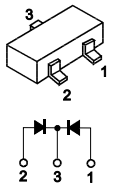
2SC2389STP-R



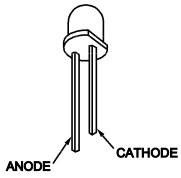
2SC2785-HFE



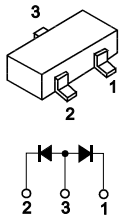
DAN202K
DAN202K-T-146



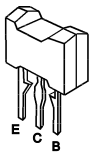
SEL1210S-CD
SEL1210S-D



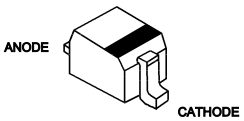
DAP202K
DAP202K-T-146



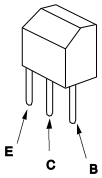
2SC2808STP-R



DTZ5.1B
DTZ9.1
RD5.6S-B
UDZ-TE-17-5.1B
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B

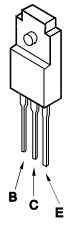


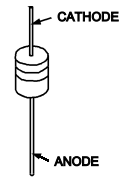
2SC3209LK
2SC3209LK-TP
2SD774-T-4
2SD774-34



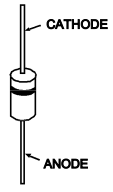
ERA81-004TP1
ERA83-006
MTZJ-T-77-12A
MTZJ-T-77-33C
MTZJ-T-77-3.9B
MTZJ-T-77-5.1
MTZJ-T-77-5.6C
MTZJ-T-77-6.2
MTZJ-T-77-6.8A
MTZJ-T-77-6.8C
MTZJ-T-77-9.1C
MTZJ-12A
MTZJ-33C
RD3.9ES-B2
MTZJ-6.2B
RD5.1ES-B1
RD5.6ESB2
RD6.8ES-B2
RD9.1ES-B3
1SS133T-77

2SC4793
2SD1763A

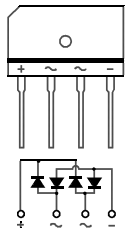




BYD33G
BYD33G-AMMO
EG-1Z-V1
EL1Z
ERC06-15S
ERD28-06S
ERD28-08S
FMN-G12S
RGP10GPKG23
RU3YX-LF-C4
RU-3YX-V1
RU4AM-T3
1SS292T-77

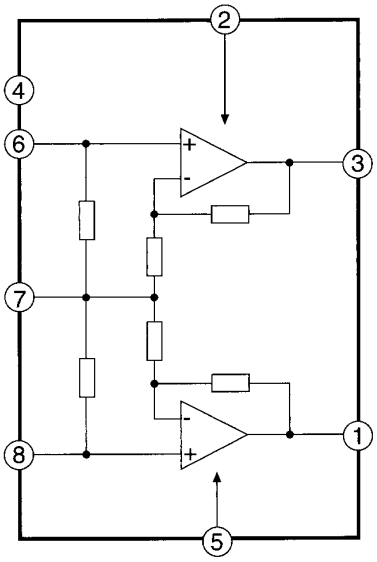


GBU4JL-6088

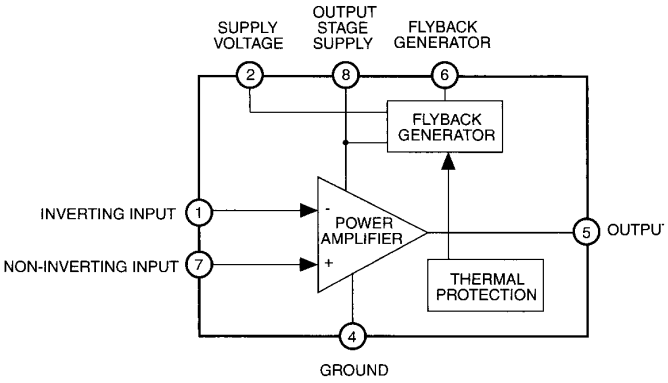


5-5. IC BLOCK DIAGRAMS

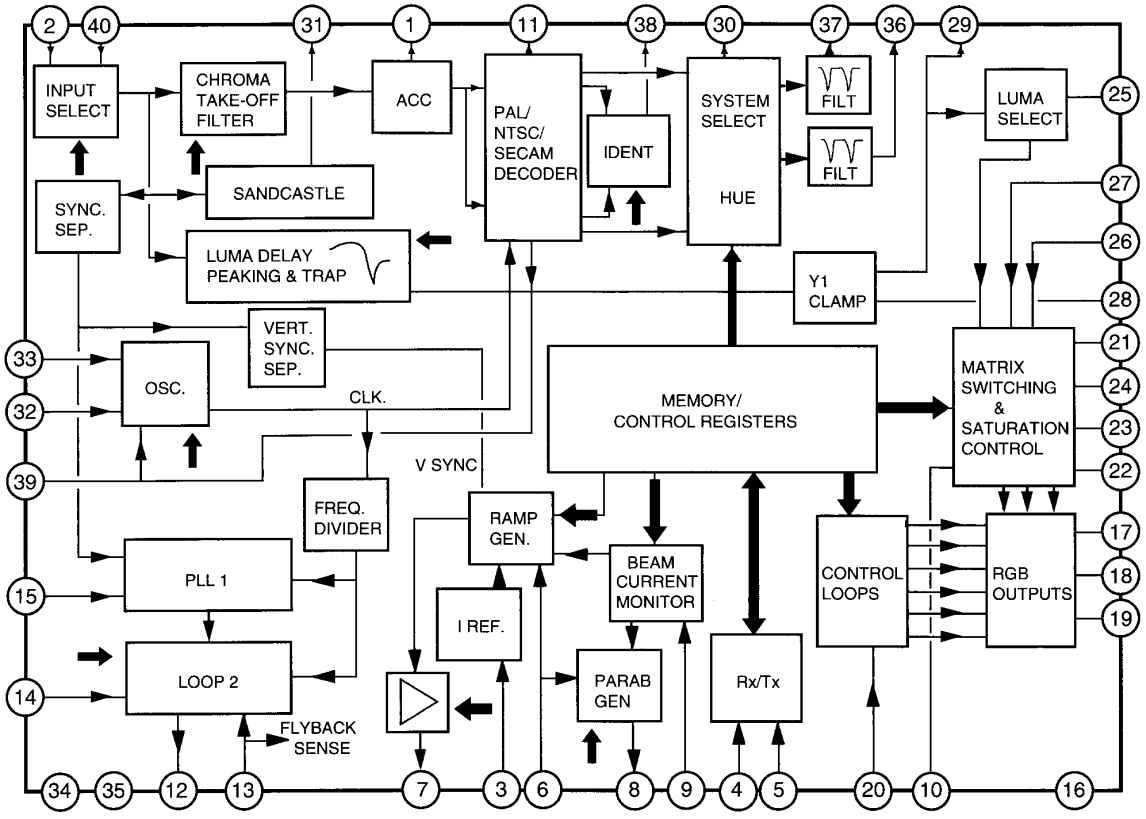
A Board IC1200 TDA7264



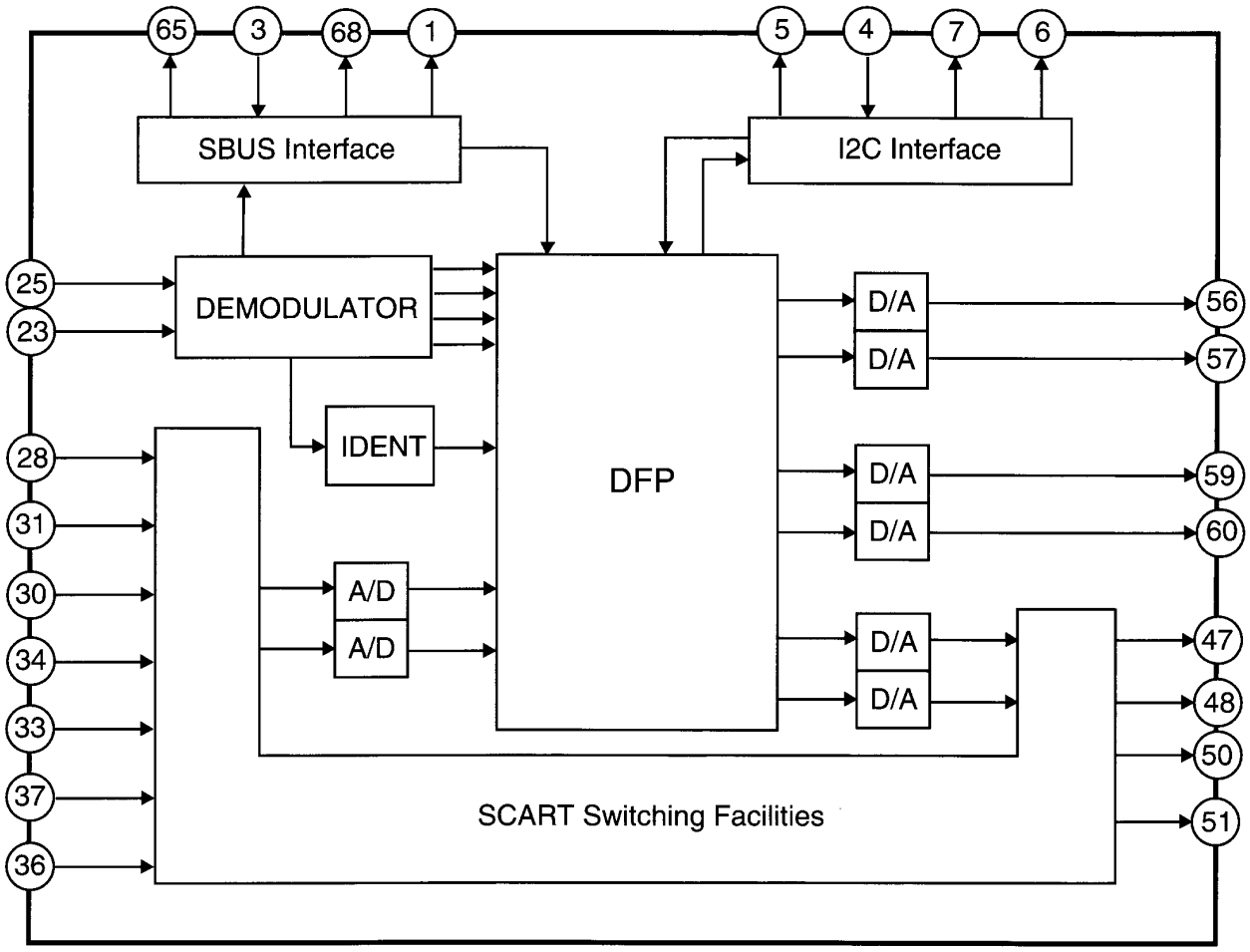
A Board IC501 STV9379



A Board IC301



A Board IC20 MSP3400C-PP-C6/MSP3410D-PP-B3



SECTION 6
EXPLODED VIEWS

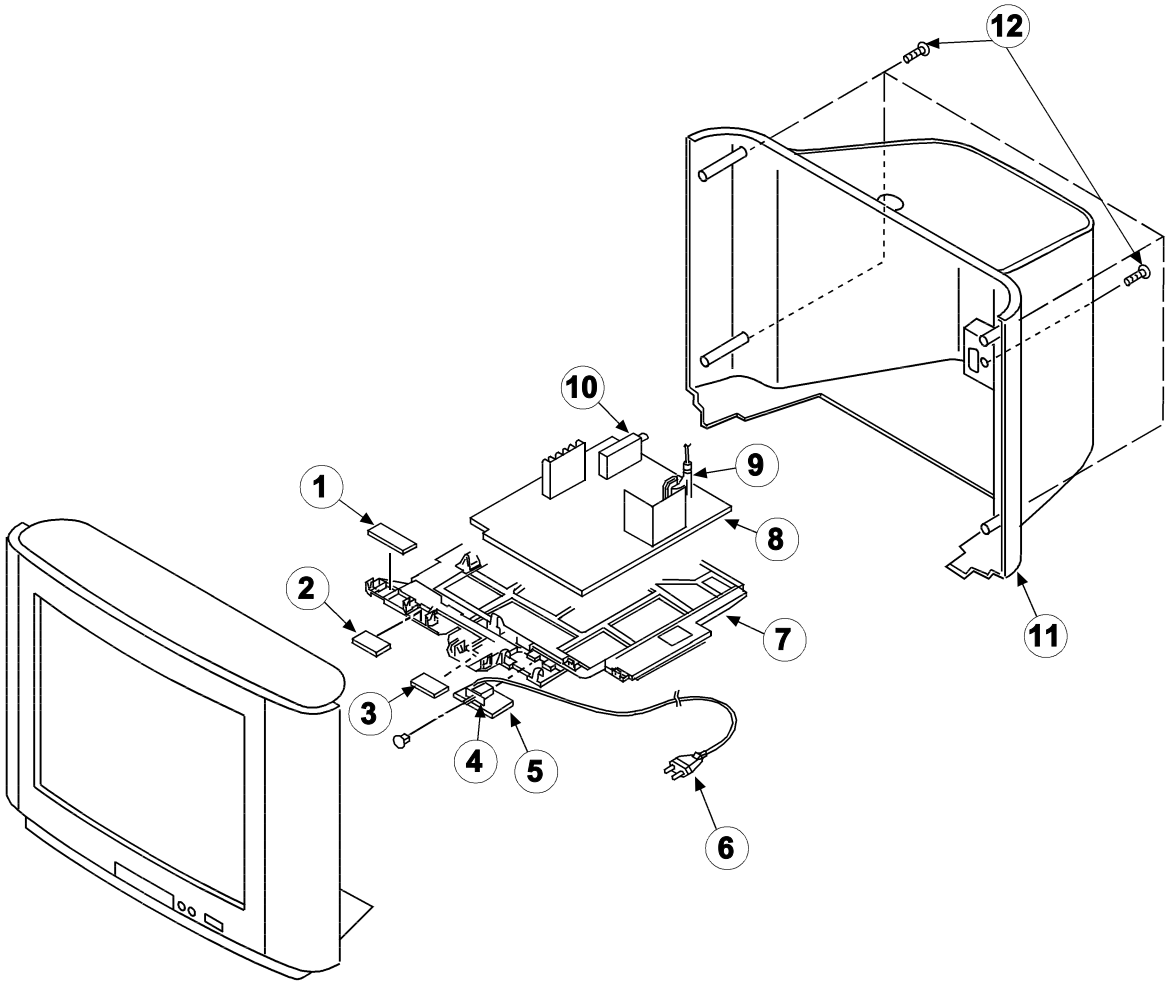
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

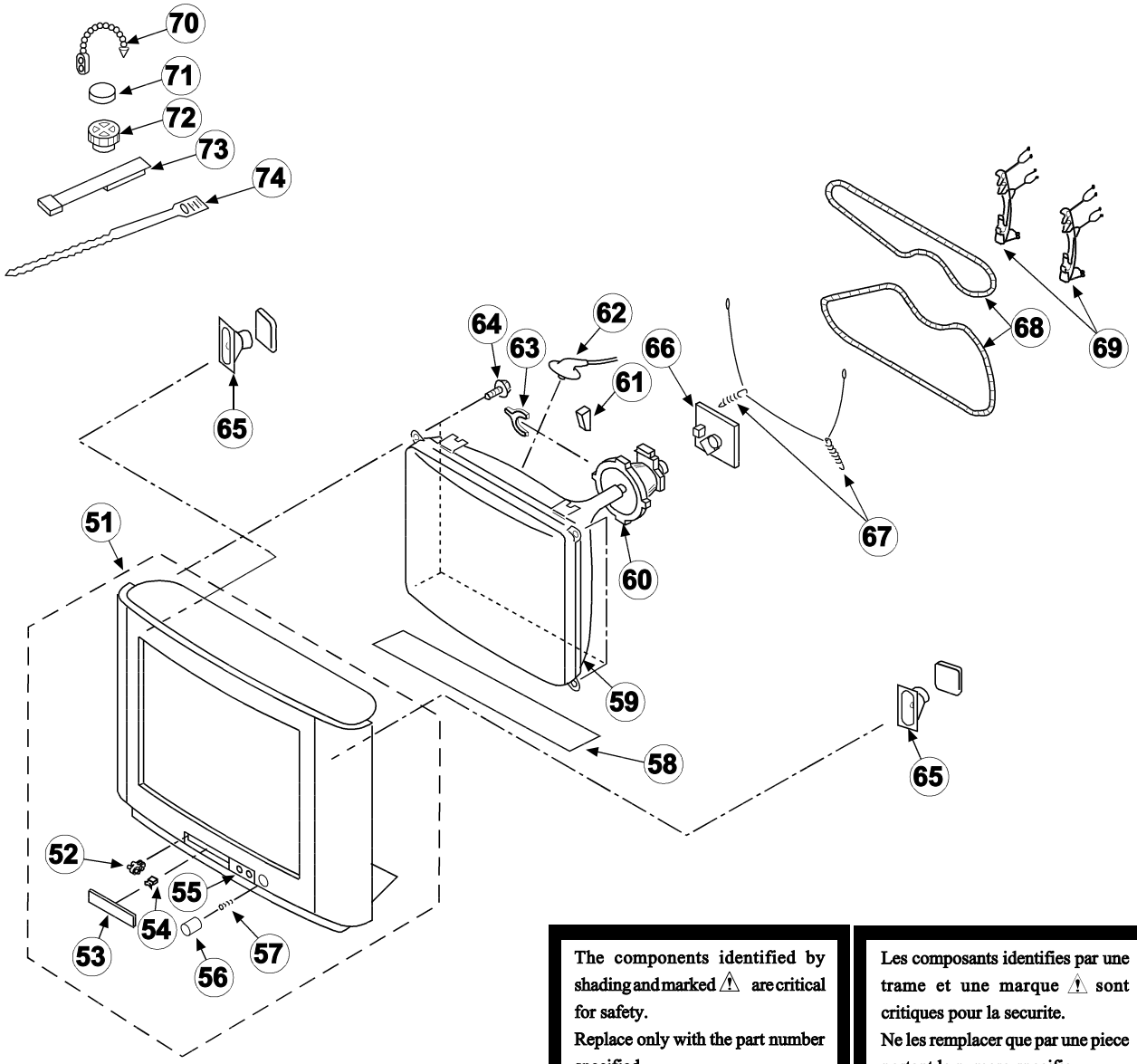
6-1. KV-21C4 CHASSIS



REF NO		PART NO	DESCRIPTION	REMARK
1		*A-1646-145-A	H1 BOARD, COMPLETE	
2		*A-1646-147-A	H3 BOARD, COMPLETE	
3		*A-1646-146-A	H2 BOARD, COMPLETE	
4	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
5		*A-1624-063-A	F1 BOARD, COMPLETE	
6	⚠	1-590-501-11	CORD, POWER (WITH NOISE FILTER)	
7		*4-203-605-11	BRACKET	
8		*A-1632-667-A	A BOARD, COMPLETE (KV-21C4B)	
		*A-1632-662-A	A BOARD, COMPLETE (KV-21C4D)	
		*A-1632-638-A	A BOARD, COMPLETE (KV-21C4E)	
		*A-1632-668-A	A BOARD, COMPLETE (KV-21C4K)	
		*A-1632-669-A	A BOARD, COMPLETE (KV-21C4R)	

REF NO		PART NO	DESCRIPTION	REMARK
9	⚠	1-453-200-11	TRANSFORMER ASSY, FLYBACK	NX-1741/U2B
10		1-693-340-11	TUNER/VIF (FR)	(KV-21C4B)
		1-693-338-11	TUNER/VIF (AEP)	(KV-21C4D/21C4E/ 21C4K/21C4R)
11		4-203-604-01	COVER, REAR	
12		7-685-663-79	SCREW (4X16), (+) BV TAPPING	

6-2. KV21C4 PICTURE TUBE

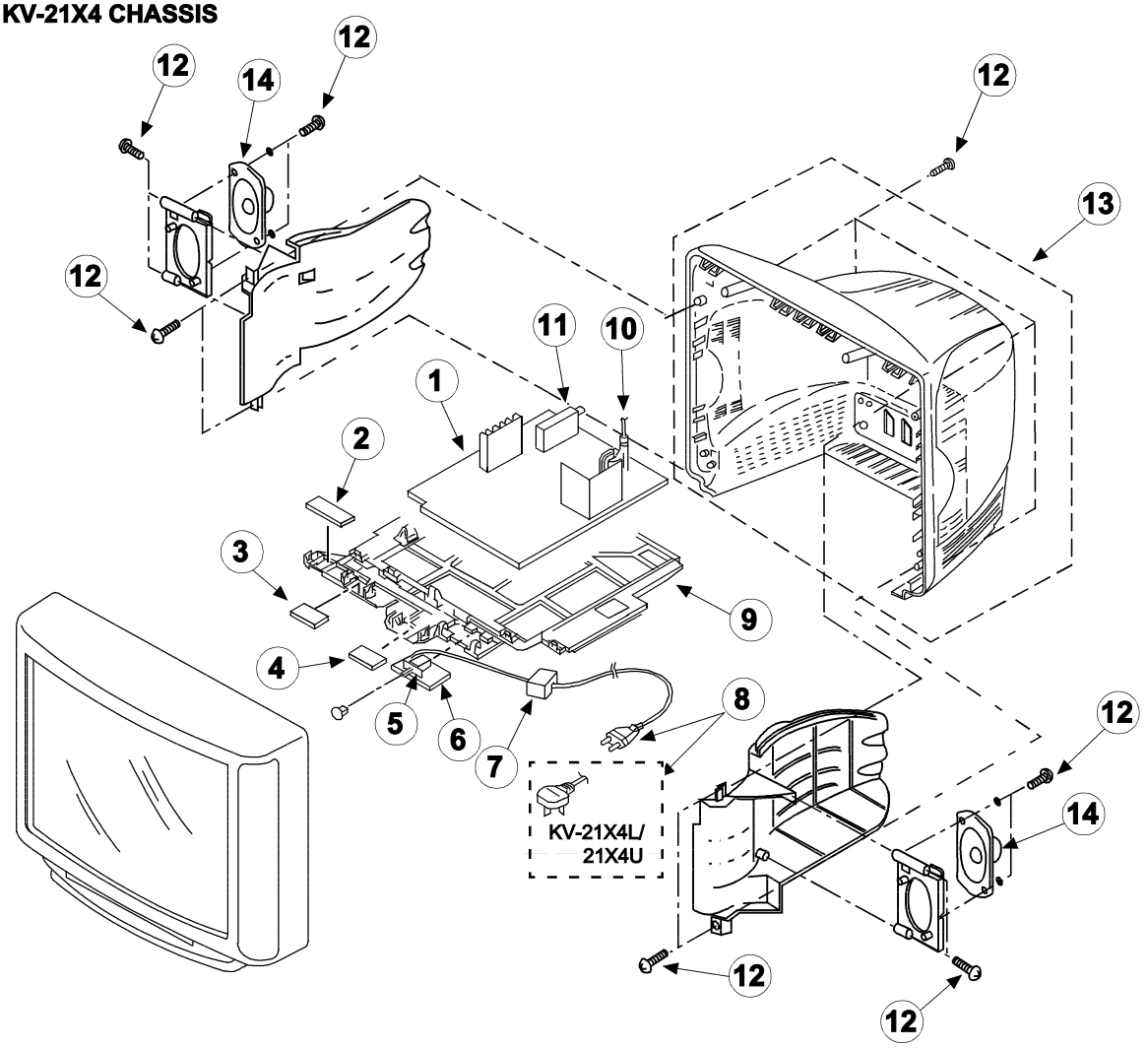


The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
51		X-4200-337-1	BEZNET ASSY	52-57
52		3-703-035-11	SHAFT, LID	
53		4-203-852-01	DOOR, CONTROL (PAINTED) (KV-21C4B/21C4E)	
		4-203-852-11	DOOR, CONTROL (PAINTED) (KV-21C4D/21C4K/21C4R)	
54		4-047-464-01	CATCHER PUSH	
55		4-203-175-01	WINDOW ORNAMENTAL	
56		4-203-176-01	BUTTON, POWER	
57		4-202-964-01	SPRING	
58		4-203-128-01	SHEET BLOTTING	
59	⚠	8-738-783-05	PICTURE TUBE (SD-169) (A51JXH61X)	
60	⚠	8-451-295-43	DEFLECTION YOKE (Y21PFA2)	
61		3-704-495-01	SPACER, DY	
62	⚠	1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
63		1-452-277-00	MAGNET, BMC	
64		4-365-808-01	SCREW (5), TAPPING	
65		1-504-570-11	SPEAKER (7.5X13CM)	
66		*A-1638-102-A	C BOARD, COMPLETE	
67		4-369-318-21	SPRING, TENSION	
68	⚠	1-411-922-11	COIL DEGAUSSING	
69		*4-386-622-11	BAND, DGC	
70		4-308-870-00	CLIP, LEAD WIRE	
71		1-452-032-00	MAGNET, DISK; 10MM Ø	
72		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
73		X-4387-214-1	PERMALLOY ASSY, CORRECTION	
74		3-701-007-00	BAND, BINDING	

6-3. KV-21X4 CHASSIS

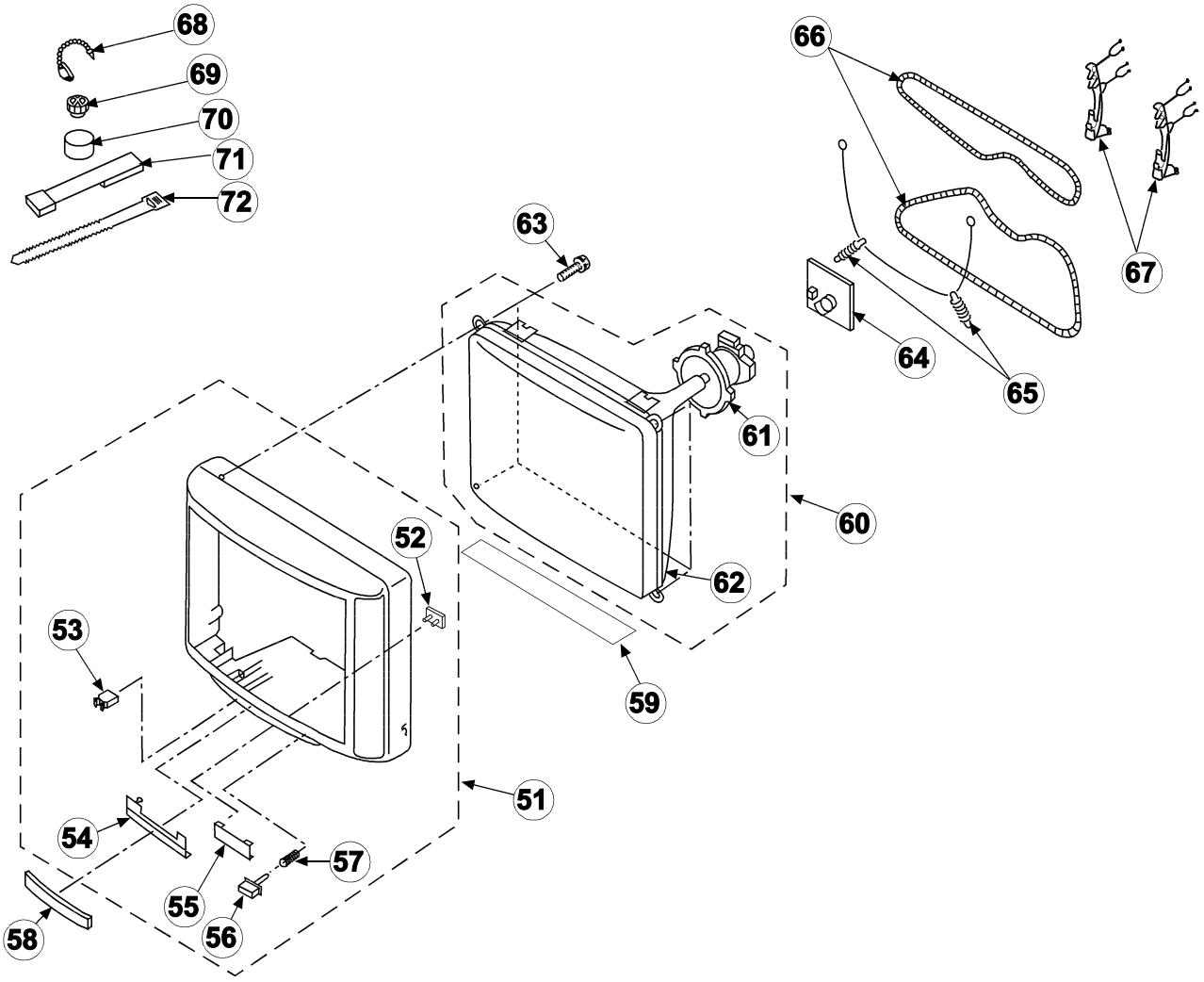


The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
1		*A-1632-680-A	A BOARD, COMPLETE (KV-21X4A)	
		*A-1632-677-A	A BOARD, COMPLETE (KV-21X4B)	
		*A-1632-678-A	A BOARD, COMPLETE (KV-21X4D)	
		*A-1632-651-A	A BOARD, COMPLETE (KV-21X4E)	
		*A-1632-683-A	A BOARD, COMPLETE (KV-21X4K)	
		*A-1632-684-A	A BOARD, COMPLETE (KV-21X4L)	
		*A-1632-681-A	A BOARD, COMPLETE (KV-21X4R)	
		*A-1632-682-A	A BOARD, COMPLETE (KV-21X4U)	
2		*A-1646-148-A	H1 BOARD, COMPLETE	
3		*A-1646-150-A	H3 BOARD, COMPLETE	
4		*A-1646-149-A	H2 BOARD, COMPLETE	
5	⚠	1-571-433-21	SWITCH PUSH (AC POWER)	
6		*A-1624-064-A	F1 BOARD, COMPLETE	
7		4-389-201-11	HOLDER, AC CORD	
8	⚠	1-765-286-11	CORD POWER (KV-21X4A/21X4B/21X4D/21X4E/21X4K/21X4R)	
	⚠	1-776-204-11	CORD POWER (FILTER) 2.5A/250V (KV-21X4L/21X4U)	
9		*4-203-594-01	BRACKET	
10	⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK NX-1741/U2A	
11		1-693-338-11	TUNER/VIF (AEP) (KV-21X4A/21X4D/21X4E/21X4K/21X4L/21X4R)	
		1-693-340-11	TUNER/VIF (FR) (KV-21X4B)	
		1-693-339-11	TUNER/VIF (UK) (KV21X4U)	
12		4-039-358-01	SCREW (4X16), (+) BV TAPPING	
13		X-4200-286-1	COVER ASSY REAR (SC)	
14		1-544-727-21	SPEAKER (7.5X13CM)	

6-4. KV-21X4 PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
51		X-4200-298-1	BEZNET ASSY	52-57
52		4-202-465-01	GUIDE, LED LIGHT	
53		4-047-464-01	CATCHER PUSH	
54		4-202-642-01	DOOR	
55		4-202-643-21	WINDOW ORNAMENTAL	
56		4-043-517-01	BUTTON POWER	
57		4-202-746-11	SPRING, COMPRESSION	
58		4-202-644-11	ORNAMENT, DOOR	
59		4-203-128-11	SHEET, BLOTTING	
60	⚠	8-738-783-71	ITC	61-62
61	⚠	8-451-295-45	DEFLECTION YOKE (Y21PFA2BA)	

REF NO		PART NO	DESCRIPTION	REMARK
62	⚠	8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
63		4-036-189-01	SCREW SELF TAPPING	
64		*A-1638-090-A	C BOARD, COMPLETE	
65		4-200-433-01	SPRING, EXTENSION	
66	⚠	1-406-828-11	COIL DEGAUSSING	
67		*4-386-622-11	BAND, DGC	
68		4-308-870-00	CLIP, LEAD WIRE	
69		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
70		1-452-032-00	MAGNET, DISK; 10MM Ø	
71		X-4387-214-1	PERMALLOY ASSY, CORRECTION	
72		3-701-007-00	BAND, BINDING	

SECTION 7

ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

CAPACITORS MF : mF , PF : mmF

COILS MMH : mH , µH : mH

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

F1 A

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1624-063-A	F1 BOARD, COMPLETE	
		**********	
			(KV-21C4B/21C4D/21C4E/ 21C4K/21C4R)
	*A-1624-064-A	F1 BOARD, COMPLETE	
		**********	
			(KV-21X4A/21X4B/21X4D/21X4E/ 21X4K/21X4L/21X4R/21X4U)
		< CONNECTOR >	
CN603	⚠ 1-580-844-11	PIN, CONNECTOR (POWER)	
CN604	⚠ 1-695-292-11	PIN, CONNECTOR (POWER)	
		< FUSE >	
F601	⚠ 1-576-231-21	FUSE (4A 250V)	
F601	⚠ *1-533-725-11	HOLDER, FUSE	
		< SWITCH >	
S601	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
		**********	
	*A-1632-667-A	A BOARD,COMPLETE	(KV-21C4B)
		**********	
	*A-1632-662-A	A BOARD,COMPLETE	(KV-21C4D)
		**********	
	*A-1632-638-A	A BOARD,COMPLETE	(KV-21C4E)
		**********	
	*A-1632-668-A	A BOARD,COMPLETE	(KV-21C4K)
		**********	
	*A-1632-669-A	A BOARD,COMPLETE	(KV-21C4R)
		**********	
	*A-1632-680-A	A BOARD,COMPLETE	(KV-21X4A)
		**********	
	*A-1632-677-A	A BOARD,COMPLETE	(KV-21X4B)
		**********	
	*A-1632-678-A	A BOARD,COMPLETE	(KV-21X4D)
		**********	
	*A-1632-651-A	A BOARD,COMPLETE	(KV-21X4E)
		**********	
	*A-1632-683-A	A BOARD,COMPLETE	(KV-21X4K)
		**********	
	*A-1632-684-A	A BOARD,COMPLETE	(KV-21X4L)
		**********	
	*A-1632-681-A	A BOARD,COMPLETE	(KV-21X4R)
		**********	
	*A-1632-682-A	A BOARD,COMPLETE	(KV-21X4U)
		**********	

REF.NO.	PART NO.	DESCRIPTION			REMARK
		< CAPACITOR >			
C002	1-126-968-11	ELECT	100MF	20%	50V
C003	1-164-492-11	CERAMIC CHIP	0.15MF	10%	16V
C004	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C005	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C006	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C007	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C008	1-126-965-11	ELECT	22MF	20%	50V
C009	1-126-961-11	ELECT	2.2MF	20%	50V
C011	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C012	1-163-109-00	CERAMIC CHIP	47PF	5%	50V (KV-21C4B/21C4E/21C4K/21C4R)
	1-163-113-00	CERAMIC CHIP	68PF	5%	50V (KV-21C4D/21C4) (KV-21X4A/21X4B/21X4D/21X4E/ 21X4K/21X4L/21X4R/21X4U)
C013	1-163-078-11	CERAMIC CHIP	0.033MF	10%	25V
C014	1-164-346-11	CERAMIC CHIP	1MF		16V
C015	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C017	1-162-638-11	CERAMIC CHIP	1MF		16V
C018	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C019	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C020	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C021	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C022	1-126-960-11	ELECT	1MF	20%	50V
C024	1-126-965-11	ELECT	22MF	20%	50V
C025	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C026	1-126-965-11	ELECT	22MF	20%	50V
C027	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C028	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C029	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C030	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C031	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C034	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C035	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C036	1-126-965-11	ELECT	22MF	20%	50V
C037	1-164-346-11	CERAMIC CHIP	1MF		16V
C038	1-164-346-11	CERAMIC CHIP	1MF		16V
C039	1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V
C040	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C041	1-126-965-11	ELECT	22MF	20%	50V
C042	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C044	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C045	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C046	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C099	1-165-320-11	CERAMIC CHIP	0.47MF	10%	16V

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
C121	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C122	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C123	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C124	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C131	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C135	1-126-934-11	ELECT	220MF	20%	16V
C136	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C162	1-126-967-11	ELECT	47MF	20%	16V
C201	1-126-965-11	ELECT	22MF	20%	50V
C202	1-126-941-11	ELECT	470MF	20%	25V
C205	1-126-963-11	ELECT	4.7MF	20%	50V
C206	1-126-933-11	ELECT	100MF	20%	16V
C207	1-126-933-11	ELECT	100MF	20%	16V
C208	1-126-963-11	ELECT	4.7MF	20%	50V
C210	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C211	1-126-965-11	ELECT	22MF	20%	50V
C213	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C214	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C215	1-163-117-00	CERAMIC CHIP	100PF	5%	50V (KV-21C4B/21X4B)
C216	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C217	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C218	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C219	1-126-964-11	ELECT	10MF	20%	50V
C220	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C221	1-163-117-00	CERAMIC CHIP	100PF	5%	50V (KV-21C4B/21X4B)
C223	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C224	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C225	1-126-964-11	ELECT	10MF	20%	50V
C226	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C227	1-163-084-00	CERAMIC CHIP	1.5PF	0.25PF	50V
C228	1-163-084-00	CERAMIC CHIP	1.5PF	0.25PF	50V
C229	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C230	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C233	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C234	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C235	1-126-964-11	ELECT	10MF	20%	50V
C236	1-126-964-11	ELECT	10MF	20%	50V
C240	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V
C242	1-164-346-11	CERAMIC CHIP	1MF		16V
C243	1-164-346-11	CERAMIC CHIP	1MF		16V
C244	1-164-346-11	CERAMIC CHIP	1MF		16V
C245	1-164-346-11	CERAMIC CHIP	1MF		16V
C246	1-126-965-11	ELECT	22MF	20%	50V
C247	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C300	1-126-942-61	ELECT	1000MF	20%	25V
C301	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C302	1-163-038-71	CERAMIC CHIP	0.1MF		25V
C303	1-126-965-11	ELECT	22MF	20%	50V
C304	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C305	1-124-257-00	ELECT	2.2MF	20%	50V
C306	1-136-164-00	FILM	0.082MF	5%	50V
C307	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C308	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C309	1-126-163-11	ELECT	4.7MF	20%	50V
C310	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C312	1-163-038-00	CERAMIC CHIP	0.1MF		25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C313	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C314	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C315	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C316	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C317	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C319	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C320	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C321	1-126-963-11	ELECT	4.7MF	20%	50V
C322	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C323	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C324	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C325	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C326	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C327	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C328	1-163-038-71	CERAMIC CHIP	0.1MF		25V
C329	1-163-016-00	CERAMIC CHIP	0.0039MF	10%	50V
C330	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C332	1-126-965-11	ELECT	22MF	20%	50V
C333	1-107-715-11	ELECT	22MF	20%	16V
C341	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C345	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C347	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C348	1-163-031-11	CERAMIC CHIP	0.01MF		50V (KV-21C4B/21X4B)
C349	1-126-965-11	ELECT	22MF	20%	50V (KV-21C4B/21X4B)
C353	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C354	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C355	1-163-059-91	CERAMIC CHIP	0.01MF	10%	50V
C359	1-126-965-11	ELECT	22MF	20%	50V
C360	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C401	1-126-967-11	ELECT	47MF	20%	16V
C402	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C403	1-164-346-11	CERAMIC CHIP	1MF		16V
C404	1-164-346-11	CERAMIC CHIP	1MF		16V
C405	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C406	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C410	1-126-967-11	ELECT	47MF	20%	16V
C411	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C412	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C413	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C414	1-126-967-11	ELECT	47MF	20%	16V
C415	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C416	1-126-965-11	ELECT	22MF	20%	50V
C417	1-126-965-11	ELECT	22MF	20%	50V
C418	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C419	1-164-346-11	CERAMIC CHIP	1MF		16V
C420	1-164-346-11	CERAMIC CHIP	1MF		16V
C421	1-164-337-11	CERAMIC CHIP	2.2MF		16V
C422	1-164-337-11	CERAMIC CHIP	2.2MF		16V
C423	1-164-337-11	CERAMIC CHIP	2.2MF		16V
C424	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C425	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C500	1-130-489-00	FILM	0.033MF	5%	50V
C501	1-126-963-11	ELECT	4.7MF	20%	50V
C502	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C503	1-126-952-11	ELECT	1000MF	20%	35V
C504	1-126-968-11	ELECT	100MF	20%	50V
C505	1-126-941-11	ELECT	470MF	20%	25V
C506	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

A

REF.NO.		PART NO.	DESCRIPTION			REMARK
C507		1-126-965-11	ELECT	22MF	20%	50V
C508		1-130-785-11	MYLAR	0.47MF	10%	100V
C510		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C511		1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C601	⚠	1-136-516-12	FILM	0.1MF	20%	300V
C602	⚠	1-136-516-12	FILM	0.1MF	20%	300V
C603	⚠	1-117-700-61	CERAMIC	0.0022MF	99%	250V
C604	⚠	1-117-700-61	CERAMIC	0.0022MF	99%	250V
C605	⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C606	⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C610		1-104-665-11	ELECT	100MF	20%	25V
C611		1-136-538-11	FILM	0.001MF	3%	2KV
C612		1-107-929-11	ELECT	10MF	20%	100V
C613		1-162-318-11	CERAMIC	0.001MF	10%	500V
C614		1-104-666-11	ELECT	220MF	20%	25V
C615		1-124-347-00	ELECT	100MF	20%	160V
C616		1-162-116-00	CERAMIC	680PF	10%	2KV
C617		1-107-929-11	ELECT	10MF	20%	100V
C618		1-102-228-00	CERAMIC	470PF	10%	500V
C619		1-126-942-61	ELECT	1000MF	20%	25V
C621		1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C622		1-126-965-11	ELECT	22MF	20%	50V
C623		1-111-055-91	ELECT	56MF	20%	25V
C624		1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C625		1-126-967-11	ELECT	47MF	20%	50V
C626		1-102-228-00	CERAMIC	470PF	10%	500V
C627		1-111-097-11	ELECT	0.0022F	20%	35V
C628		1-126-964-11	ELECT	10MF	20%	50V
C629		1-126-933-11	ELECT	100MF	20%	16V
C630		1-113-473-11	ELECT(BLOCK)	180MF	20%	400V (KV-21C4B/21C4D/21C4E/21C4K) (KV-21X4A/21X4B/21X4D/21X4E/21X4K/21X4L/21X4U)
		1-117-751-11	ELECT(BLOCK)	220MF	20%	400V (KV-21C4R/KV-21X4R)
C631		1-124-910-11	ELECT	47MF	20%	50V
C632		1-130-785-11	MYLAR	0.47MF	10%	100V
C633		1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C634		1-104-665-11	ELECT	100MF	20%	25V
C635		1-111-097-11	ELECT	0.0022F	20%	35V
C636		1-102-228-00	CERAMIC	470PF	10%	500V
C638		1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V
C639		1-102-228-00	CERAMIC	470PF	10%	500V
C640		1-102-110-00	CERAMIC	220PF	10%	50V
C641		1-106-228-00	MYLAR	0.22MF	10%	100V
C645		1-104-666-11	ELECT	220MF	20%	25V
C646		1-163-038-00	CERAMIC CHIP	0.1MF		25V
C647		1-163-038-00	CERAMIC CHIP	0.1MF		25V
C800		1-107-650-11	ELECT	3.3MF	20%	250V
C801		1-129-746-00	FILM	0.039MF	10%	400V
C802		1-136-079-00	FILM	0.01MF	3%	2KV
C803		1-136-109-00	FILM	0.68MF	5%	200V
C804		1-126-959-11	ELECT	0.47MF	20%	50V
C805		1-102-228-00	CERAMIC	470PF	10%	500V
C806		1-102-244-00	CERAMIC	220PF	10%	500V
C807		1-107-651-11	ELECT	4.7MF	20%	250V
C809		1-162-134-11	CERAMIC	470PF	10%	2KV
C810		1-129-702-00	FILM	0.001MF	10%	400V
C812		1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C813		1-162-115-00	CERAMIC	330PF	10%	2KV
C814		1-136-159-00	FILM	0.033MF	5%	50V
C815		1-162-134-11	CERAMIC	470PF	10%	2KV
C817		1-136-559-11	MYLAR	0.0047MF	10%	400V
C818		1-136-933-11	FILM	1MF	5%	100V
C819		1-162-318-11	CERAMIC	0.001MF	10%	500V
C820		1-126-951-11	ELECT	470MF	20%	35V
C822		1-104-696-11	FILM	0.015MF	10%	100V
C823		1-106-375-12	MYLAR	0.022MF	10%	250V
C824		1-106-367-00	MYLAR	0.01MF	10%	400V
C825		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C826		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C827		1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C828		1-126-960-11	ELECT	1MF	20%	50V
C1200		1-136-165-00	FILM	0.1MF	5%	50V
C1201		1-136-173-00	FILM	0.47MF	5%	50V
C1202		1-136-173-00	FILM	0.47MF	5%	50V
C1203		1-136-169-00	FILM	0.22MF	5%	50V
C1204		1-136-169-00	FILM	0.22MF	5%	50V
C1205		1-101-004-00	CERAMIC	0.01MF		50V
C1206		1-101-004-00	CERAMIC	0.01MF		50V
C1215		1-136-173-00	FILM	0.47MF	5%	50V
C1216		1-137-366-11	FILM	0.0022MF	5%	50V
C1217		1-137-366-11	FILM	0.0022MF	5%	50V
			< FILTER >			
CF001		1-767-120-21	VIBRATOR, CERAMIC			
CF200		1-409-327-00	TRAP, CERAMIC (6.5MHZ)			(KV-21C4B/21X4B)
			< CONNECTOR >			
CN001		*1-564-508-11	PLUG, CONNECTOR 5P			
CN081		*1-568-881-51	PIN, CONNECTOR 6P			
CN082		*1-568-880-51	PIN, CONNECTOR 5P			
CN201		*1-568-879-11	PIN, CONNECTOR 4P			
CN402		*1-564-512-11	PLUG, CONNECTOR 9P			
CN403		*1-564-518-11	PLUG, CONNECTOR 3P			
CN404		*1-564-519-11	PLUG, CONNECTOR 4P			
CN601	⚠	*1-695-292-11	PIN, CONNECTOR (POWER)			
CN603	⚠	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN801		*1-580-798-11	CONNECTOR PIN (DY) 6P			
			< DIODE >			
D002		8-719-982-27	DIODE MTZJ-33C			
D003		8-719-914-43	DIODE DAN202K			
D004		8-719-991-33	DIODE 1SS133T-77			
D005		8-719-914-43	DIODE DAN202K			
D006		8-719-914-43	DIODE DAN202K			
D007		8-719-914-43	DIODE DAN202K			
D009		8-719-976-99	DIODE DTZ5.1B			
D011		8-719-976-99	DIODE DTZ5.1B			
D012		8-719-992-02	DIODE RB705D			
D014		8-719-056-84	DIODE UDZ-TE-17-7.5B			
D301		8-719-991-33	DIODE 1SS133T-77			
D302		8-719-991-33	DIODE 1SS133T-77			
D306		8-719-976-99	DIODE DTZ5.1B			
D307		8-719-914-43	DIODE DAN202K			(KV-21C4B/21X4B)
D308		8-719-991-33	DIODE 1SS133T-77			(KV-21C4B/21X4B)
D338		8-719-914-43	DIODE DAN202K			
D401		8-719-109-97	DIODE RD6.8ES-B2			
D402		8-719-109-97	DIODE RD6.8ES-B2			
D403		8-719-109-97	DIODE RD6.8ES-B2			
D404		8-719-109-97	DIODE RD6.8ES-B2			
D405		8-719-109-97	DIODE RD6.8ES-B2			

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D406	8-719-109-97	DIODE RD6.8ES-B2	
D407	8-719-109-97	DIODE RD6.8ES-B2	
D408	8-719-110-14	DIODE RD9.1ES-B3	
D409	8-719-110-14	DIODE RD9.1ES-B3	
D410	8-719-110-14	DIODE RD9.1ES-B3	
D411	8-719-991-33	DIODE 1SS133T-77	
D412	8-719-109-97	DIODE RD6.8ES-B2	
D413	8-719-991-33	DIODE 1SS133T-77	
D414	8-719-056-84	DIODE UDZ-TE-17-7.5B	
D415	8-719-110-14	DIODE RD9.1ES-B3	
D416	8-719-056-84	DIODE UDZ-TE-17-7.5B	
D417	8-719-056-84	DIODE UDZ-TE-17-7.5B	
D418	8-719-056-84	DIODE UDZ-TE-17-7.5B	
D421	8-719-109-97	DIODE RD6.8ES-B2	
D501	8-719-302-43	DIODE ELIZ	
D602	8-719-991-33	DIODE 1SS133T-77	
D603	8-719-109-97	DIODE RD6.8ES-B2	
D604	8-719-302-43	DIODE ELIZ	
D605	8-719-302-43	DIODE ELIZ	
D606	8-719-028-89	DIODE EK04.V1	
D607	8-719-046-78	DIODE EG-1Z-V1	
D608	8-719-302-43	DIODE ELIZ	
D609	8-719-312-10	DIODE RU4AM-T3	
D610	8-719-025-88	DIODE GBU4JL-6088	
D612	8-719-046-76	DIODE RU3YX-LF-C4	
D613	8-719-058-38	DIODE FMN-G12S	
D614	8-719-109-97	DIODE RD6.8ES-B2	
D615	8-719-302-43	DIODE ELIZ	
D616	8-719-110-03	DIODE RD7.5ES-B2	
D617	8-719-991-33	DIODE 1SS133T-77	
D619	8-719-046-78	DIODE EG-1Z-V1	
D620	8-719-110-14	DIODE RD9.1ES-B3	
D621	8-719-058-38	DIODE FMN-G12S	
D622	8-719-991-33	DIODE 1SS133T-77	
D623	8-719-924-16	DIODE MTZJ-T-77-24	
D625	8-719-991-33	DIODE 1SS133T-77	
D626	8-719-302-43	DIODE ELIZ	
D627	8-719-991-33	DIODE 1SS133T-77	
D801	8-719-950-57	DIODE BYD33G	
D802	8-719-302-43	DIODE ELIZ	
D803	8-719-945-80	DIODE ERC06-15S	
D805	8-719-928-08	DIODE ERD28-08S	
D806	8-719-302-43	DIODE ELIZ	
D807	8-719-991-33	DIODE 1SS133T-77	
D809	8-719-302-43	DIODE ELIZ	
D1200	8-719-109-72	DIODE RD3.9ES-B2	
		< FUSE >	
F601	1-535-143-31	LEAD, JUMPER (15.0MM)	
		< FERRITE BEAD >	
FB001	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB002	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB003	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB602	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB604	1-535-465-11	LEAD, JUMPER (5.0MM)	
FB605	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB606	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB607	1-412-911-11	INDUCTOR, FERRITE BEAD	
		< ENCAPSULATED FILTER >	
FL201	1-239-803-11	FILTER, EMI	
		< IC >	
IC002	8-759-437-34	IC ST24W04FB6	
IC004	8-759-073-00	IC TEA2114	
IC005	8-759-510-54	IC PST572D	
IC200	8-759-481-43	IC MSP3410D-PP-B3	(KV-21C4B/21C4E/21C4K) (KV-21X4B/21X4E/21X4K/21X4L/21X4U)
	8-759-429-97	IC MSP3400C-PP-C6	(KV-21C4D/21C4R) (KV-21X4A/21X4D/21X4R)
IC201	8-759-502-21	IC TDA2822M	
IC301	8-759-333-45	IC MC44002P	
IC302	8-759-333-46	IC MC44140P	
IC401	8-759-064-91	IC NJM2233BL	
IC501	8-759-192-71	IC STV9379	
	4-202-373-01	SPRING, IC (IC501)	
IC600	8-749-924-99	IC STR-S6707	
	4-202-373-01	SPRING, IC (IC600)	
IC601 ⚠	8-749-010-64	PHOTO COUPLER PC123FY2	
IC602	8-749-920-61	IC SE-135N	
IC603	8-759-507-29	IC LM7808CT	
IC604	8-759-457-41	IC KA76L05Z	
IC605	8-759-510-52	IC L4941BV	
	4-202-373-01	SPRING, IC (IC605)	
IC1200	8-759-473-02	IC TDA7269	
	4-202-710-01	SPACER, INSULATING (IC1200)	
	4-202-373-01	SPRING, IC (IC1200)	
		< SOCKET >	
J401	1-695-551-11	SOCKET 21P	
		< COIL >	
L001	1-414-181-11	INDUCTOR 4.7UH	
L108	1-414-740-21	INDUCTOR 4.7UH	
L111	1-408-408-00	INDUCTOR 8.2UH	
L112	1-408-397-00	INDUCTOR 1UH	
L113	1-408-408-00	INDUCTOR 8.2UH	
L200	1-408-406-00	INDUCTOR 5.6UH	(KV-21C4B/21X4B)
L201	1-535-465-11	LEAD, JUMPER (5.0MM)	
L203	1-410-385-11	INDUCTOR CHIP 22UH	
L204	1-410-385-11	INDUCTOR CHIP 22UH	
L301	1-410-989-11	INDUCTOR CHIP 0.47UH	
L302	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
L401	1-535-465-11	LEAD, JUMPER (5.0MM)	
L402	1-535-465-11	LEAD, JUMPER (5.0MM)	
L403	1-535-465-11	LEAD, JUMPER (5.0MM)	
L404	1-535-465-11	LEAD, JUMPER (5.0MM)	
L405	1-408-409-00	INDUCTOR 10UH	
L406	1-408-409-00	INDUCTOR 10UH	
L407	1-408-409-00	INDUCTOR 10UH	
L408	1-408-409-00	INDUCTOR 10UH	
L409	1-410-985-11	INDUCTOR CHIP 0.22UH	
L410	1-408-409-00	INDUCTOR 10UH	
L411	1-408-409-00	INDUCTOR 10UH	
L412	1-410-985-11	INDUCTOR CHIP 0.22UH	

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
L501	1-412-525-31	INDUCTOR 10UH	
L609	1-414-743-21	INDUCTOR 47UH	
L611	1-414-743-21	INDUCTOR 47UH	
L612	1-412-522-41	INDUCTOR 5.6UH	
L613	1-412-522-41	INDUCTOR 5.6UH	
L800	1-412-553-11	INDUCTOR 3.3MMH	
L801	1-420-872-00	COIL, AIR-CORE	
L802	1-411-635-11	COIL, AIR-CORE	
L803	1-459-390-00	COIL (WITH CORE)	
L804	1-459-105-21	COIL(WITH CORE)	
L805	1-412-531-31	INDUCTOR 33UH	
L806	1-459-652-12	HLC	
L807	1-535-465-11	LEAD, JUMPER (5.0MM)	
L808	1-535-143-71	LEAD, JUMPER (7.5MM)	
		< IC LINK >	
PS600 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS601 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS603 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
		< TRANSISTOR >	
Q002	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q006	8-729-216-22	TRANSISTOR 2SA1162-G	
Q007	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q008	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q009	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q011	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q012	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q013	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q014	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q110	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q118	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q200	8-729-900-53	TRANSISTOR DTC114EKA	
Q201	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q202	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q204	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q205	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q207	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-21C4B/21X4B)
Q208	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-21C4B/21X4B)
Q209	8-729-620-06	TRANSISTOR 2SC3052-EF	(KV-21C4B/21X4B)
Q210	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q300	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q301	8-729-900-53	TRANSISTOR DTC114EK	
Q302	8-729-900-53	TRANSISTOR DTC114EK	
Q303	8-729-900-53	TRANSISTOR DTC114EK	
Q304	8-729-900-53	TRANSISTOR DTC114EK	
Q305	8-729-900-53	TRANSISTOR DTC114EK	
Q306	8-729-900-53	TRANSISTOR DTC114EK	
Q307	8-729-026-41	TRANSISTOR 2SA933AS-QRT	(KV-21C4B/21X4B)
Q310	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q311	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q312	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q403	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q405	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q406	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q407	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q408	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q409	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q410	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R	
Q411	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q500	8-729-017-06	TRANSISTOR 2SC4793	
Q501	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q601	8-729-025-04	TRANSISTOR 2SC3852A	
Q602	8-729-320-28	TRANSISTOR 2SA1859	
Q603	8-729-027-08	TRANSISTOR 2SC2389STP-R	
Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R	
Q606	8-729-029-56	TRANSISTOR DTA144ESA	
Q608	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q617	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-140-50	TRANSISTOR 2SC3209LK	
Q802	8-729-033-85	TRANSISTOR S2000N-16E305A	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q802)	
Q803	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q804	8-729-019-01	TRANSISTOR 2SD2394-EF	
	*4-368-683-11	SPRING, TRANSISTOR (Q804)	
Q805	8-729-140-96	TRANSISTOR 2SD774-34	
Q1200	8-729-620-06	TRANSISTOR 2SC2412K-T-146-R	
Q1201	8-729-620-06	TRANSISTOR 2SC2412K-T-146-R	
		< RESISTOR >	
JR039	1-216-295-00	CONDUCTOR, CHIP	
R001	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R002	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R003	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R004	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R005	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R006	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R007	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R012	1-249-437-11	CARBON 47K 5% 1/4W	
R013	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R014	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R016	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R017	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R018	1-216-295-00	CONDUCTOR, CHIP	
R019	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R020	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R021	1-216-258-00	METAL GLAZE 330K 5% 1/8W	
R022	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R023	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R025	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R026	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R027	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R029	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R030	1-215-900-11	METAL OXIDE 22K 5% 2W F	
R031	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R032	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R033	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R034	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R036	1-216-295-00	CONDUCTOR, CHIP	
R037	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R038	1-216-295-00	CONDUCTOR, CHIP	
R040	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R041	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W	
R042	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R043	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R044	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R045	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R046	1-216-254-00	METAL GLAZE 220K 5% 1/8W	

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
R047	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R049	1-216-041-00	METAL GLAZE	470	5%	1/10W
R050	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R051	1-216-174-00	METAL GLAZE	100	5%	1/8W
R052	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R053	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R054	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R057	1-216-198-91	METAL GLAZE	1K	5%	1/8W
R058	1-216-198-91	METAL GLAZE	1K	5%	1/8W
R064	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R065	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R066	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R067	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R068	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R069	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R070	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R071	1-216-174-00	METAL GLAZE	100	5%	1/8W
R072	1-216-174-00	METAL GLAZE	100	5%	1/8W
R078	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R088	1-216-043-91	METAL GLAZE	560	5%	1/10W
R089	1-216-043-91	METAL GLAZE	560	5%	1/10W
R090	1-216-043-91	METAL GLAZE	560	5%	1/10W
R097	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R098	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R099	1-216-200-11	METAL GLAZE	1.2K	5%	1/8W
R110	1-216-174-00	METAL GLAZE	100	5%	1/8W
R111	1-216-174-00	METAL GLAZE	100	5%	1/8W
R112	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R113	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R114	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R115	1-216-190-00	METAL GLAZE	470	5%	1/8W
R116	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R117	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R118	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R119	1-216-031-00	METAL GLAZE	180	5%	1/10W
R120	1-216-041-00	METAL GLAZE	470	5%	1/10W
R124	1-216-025-00	METAL GLAZE	100	5%	1/10W
R125	1-216-025-00	METAL GLAZE	100	5%	1/10W
R126	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R134	1-216-037-00	METAL GLAZE	330	5%	1/10W
R163	1-216-029-00	METAL GLAZE	150	5%	1/10W
R174	1-216-033-00	METAL GLAZE	220	5%	1/10W
R200	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R202	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R203	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R204	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R205	1-216-295-00	CONDUCTOR, CHIP			
R206	1-249-399-11	CARBON	33	5%	1/4W
R208	1-216-295-00	CONDUCTOR, CHIP			
R209	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R210	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R211	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R213	1-216-174-00	METAL GLAZE	100	5%	1/8W
R214	1-216-174-00	METAL GLAZE	100	5%	1/8W
R215	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R218	1-216-037-00	METAL GLAZE	330	5%	1/10W (KV-21C4B/21X4B)
R219	1-216-049-00	METAL GLAZE	1K	5%	1/10W (KV-21C4B/21X4B)
R220	1-216-045-00	METAL GLAZE	680	5%	1/10W (KV-21C4B/21X4B)
R221	1-216-033-00	METAL GLAZE	220	5%	1/10W (KV-21C4B/21X4B)
R222	1-216-001-00	METAL GLAZE	10	5%	1/10W (KV-21C4B/21X4B)
R223	1-216-041-00	METAL GLAZE	470	5%	1/10W (KV-21C4B/21X4B)
R224	1-216-025-00	METAL GLAZE	100	5%	1/10W (KV-21C4B/21X4B)
R225	1-216-037-00	METAL GLAZE	330	5%	1/10W
R226	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R227	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R228	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W (KV-21C4B/21X4B)
R229	1-216-073-00	METAL GLAZE	10K	5%	1/10W (KV-21C4B/21X4B)
R230	1-216-025-00	METAL GLAZE	100	5%	1/10W (KV-21C4B/21X4B)
R231	1-216-035-00	METAL GLAZE	270	5%	1/10W (KV-21C4B/21X4B)
R236	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R237	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R238	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R239	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R240	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R301	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R302	1-216-037-00	METAL GLAZE	330	5%	1/10W
R303	1-216-090-00	METAL GLAZE	51K	5%	1/10W
R304	1-216-025-00	METAL GLAZE	100	5%	1/10W
R305	1-216-025-00	METAL GLAZE	100	5%	1/10W
R306	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R307	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R308	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R309	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R310	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R311	1-216-025-00	METAL GLAZE	100	5%	1/10W
R312	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R313	1-216-045-00	METAL GLAZE	680	5%	1/10W
R314	1-216-045-00	METAL GLAZE	680	5%	1/10W
R315	1-216-045-00	METAL GLAZE	680	5%	1/10W
R316	1-216-033-00	METAL GLAZE	220	5%	1/10W
R317	1-216-033-00	METAL GLAZE	220	5%	1/10W
R318	1-216-021-00	METAL GLAZE	68	5%	1/10W
R322	1-216-022-00	METAL GLAZE	75	5%	1/10W
R323	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R325	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R326	1-216-041-00	METAL GLAZE	470	5%	1/10W
R327	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R328	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R332	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R333	1-216-037-00	METAL GLAZE	330	5%	1/10W
R334	1-216-033-00	METAL GLAZE	220	5%	1/10W
R335	1-216-025-00	METAL GLAZE	100	5%	1/10W
R336	1-216-025-00	METAL GLAZE	100	5%	1/10W
R337	1-216-025-00	METAL GLAZE	100	5%	1/10W
R338	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R339	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R340	1-216-238-91	METAL GLAZE	47K	5%	1/8W
R341	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R342	1-216-186-00	METAL GLAZE	330	5%	1/8W
R343	1-216-295-00	CONDUCTOR, CHIP			

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R344	1-216-295-00	CONDUCTOR, CHIP				
R345	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R347	1-216-041-00	METAL GLAZE	470	5%	1/10W	(KV-21C4B/21X4B)
R348	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-21C4B/21X4B)
R349	1-216-101-00	METAL GLAZE	150K	5%	1/10W	(KV-21C4B/21X4B)
R350	1-216-033-00	METAL GLAZE	220	5%	1/10W	(KV-21C4B/21X4B)
R351	1-218-463-91	METAL GLAZE	8.2M	5%	1/10W	
R354	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R355	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R359	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R360	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R361	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R362	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R363	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R364	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R365	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R366	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R367	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R368	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R369	1-216-238-91	METAL GLAZE	47K	5%	1/8W	
R371	1-216-192-00	METAL GLAZE	560	5%	1/8W	
R372	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R401	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R402	1-247-807-31	CARBON	100	5%	1/4W	
R403	1-247-807-31	CARBON	100	5%	1/4W	
R404	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R405	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R406	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R407	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R408	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R409	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R410	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R411	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R412	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R413	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R414	1-260-311-11	CARBON	39	5%	1/2W	
R415	1-260-311-11	CARBON	39	5%	1/2W	
R416	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R417	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R418	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R419	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R420	1-247-807-31	CARBON	100	5%	1/4W	
R421	1-247-807-31	CARBON	100	5%	1/4W	
R422	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R423	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R424	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R425	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R426	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R427	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R428	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R429	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R430	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R431	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R432	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R433	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R434	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R435	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R436	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R437	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R501	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R502	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R503	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W	
R504	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R505	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R506	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R507	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R508	1-215-865-11	METAL OXIDE	220	5%	1W	F
R509	1-249-383-11	CARBON	1.5	5%	1/4W	F
R513	1-249-429-11	CARBON	10K	5%	1/4W	
R514	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R515	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R516	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R601	⚠ 1-202-962-11	WIREWOUND	3.3	5%	10W	
R602	1-249-417-11	CARBON	1K	5%	1/4W	
R603	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R604	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R605	1-216-365-00	METAL OXIDE	0.47	5%	2W	F
R606	1-535-143-00	LEAD, JUMPER (10.00MM)				
R607	1-215-858-00	METAL OXIDE	15	5%	1W	F
R608	1-216-365-00	METAL OXIDE	0.47	5%	2W	F
R609	1-249-420-11	CARBON	1.8K	5%	1/4W	
R610	1-249-415-11	CARBON	680	5%	1/4W	
R611	1-216-354-11	METAL OXIDE	2.7	5%	1W	F
R612	⚠ 1-260-135-11	CARBON	1M	5%	1/2W	
R613	1-249-417-11	CARBON	1K	5%	1/4W	
R614	⚠ 1-218-265-11	METAL	8.2M	5%	1W	
R615	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R616	1-215-479-00	METAL	270K	1%	1/4W	
R617	1-215-877-11	METAL OXIDE	22K	5%	1W	F
R618	1-247-863-91	CARBON	22K	5%	1/4W	
R619	1-249-424-11	CARBON	3.9K	5%	1/4W	
R620	1-247-895-91	CARBON	470K	5%	1/4W	
R621	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R622	1-249-437-11	CARBON	47K	5%	1/4W	
R623	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R625	1-249-426-11	CARBON	5.6K	5%	1/4W	
R626	1-535-465-11	LEAD, JUMPER (5.0MM)				
R628	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R629	1-215-857-11	METAL OXIDE	10	5%	1W	F
R630	1-216-371-00	METAL OXIDE	1.5	5%	2W	F
R631	1-216-392-11	METAL OXIDE	1.8	5%	3W	F
R632	1-247-807-31	CARBON	100	5%	1/4W	
R634	1-249-397-11	CARBON	22	5%	1/4W	F
R635	1-249-437-11	CARBON	47K	5%	1/4W	
R636	1-249-417-11	CARBON	1K	5%	1/4W	
R637	1-247-815-91	CARBON	220	5%	1/4W	
R638	1-247-863-91	CARBON	22K	5%	1/4W	
R645	1-249-422-11	CARBON	2.7K	5%	1/4W	
R646	1-249-382-11	CARBON	1.2	5%	1/4W	F
R647	1-202-933-61	FUSIBLE	0.1	10%	1/2W	F
R648	1-249-407-11	CARBON	150	5%	1/4W	
R651	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R800	1-215-887-00	METAL OXIDE	150	5%	2W	F
R801	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R802	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R803	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R804	1-215-917-11	METAL OXIDE	1K	5%	3W	F

A C

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION				REMARK
R805		1-215-897-11	METAL OXIDE	6.8K	5%	2W	F
R806		1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R807		1-249-399-11	CARBON	33	5%	1/4W	
R808		1-202-813-00	SOLID	22K	10%	1/2W	
R810		1-247-895-91	CARBON	470K	5%	1/4W	
R813		1-216-295-00	CONDUCTOR, CHIP				
R814		1-217-811-11	FUSIBLE	0.47	5%	1/4W	
R815		1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R816		1-216-366-00	METAL OXIDE	0.56	5%	2W	F
R817		1-216-447-00	METAL OXIDE	27	5%	2W	F
R818		1-202-813-00	SOLID	22K	10%	1/2W	
R819		1-249-441-11	CARBON	100K	5%	1/4W	
R820		1-247-713-51	CARBON	1K	5%	1W	F
R821		1-216-295-00	CONDUCTOR, CHIP				
R822		1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R823		1-249-413-11	CARBON	470	5%	1/4W	
R824		1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R825		1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R826		1-216-296-00	CONDUCTOR, CHIP				
R828		1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R829		1-535-143-71	LEAD, JUMPER (7.5MM)				
R830		1-216-295-00	CONDUCTOR, CHIP				
R834		1-535-143-11	LEAD, JUMPER (10.0MM)				
R841		1-217-811-11	FUSIBLE	0.47	5%	1/4W	
R862		1-215-902-11	METAL OXIDE	47K	5%	2W	F
R1200		1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R1201		1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1202		1-216-073-71	METAL GLAZE	10K	5%	1/10W	
R1203		1-216-065-71	METAL GLAZE	4.7K	5%	1/10W	
R1204		1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R1205		1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R1208		1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1209		1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1211		1-249-424-11	CARBON	3.9K	5%	1/4W	
R1212		1-249-424-11	CARBON	3.9K	5%	1/4W	
			< RELAY >				
RY600	⚠	1-755-018-11	RELAY				
			< TRANSFORMER >				
T601	⚠	1-427-962-21	TRANSFORMER, LINE FILTER				
T602	⚠	1-431-595-11	TRANSFORMER CONVERTER SRT DT-259A				
T801		1-437-090-31	HDT				
T802	⚠	1-453-200-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2B) (KV-21C4B/21C4D/21C4E/ 21C4K/21C4R)				
		1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2A) (KV-21X4A/21X4B/21X4D/21X4E 21X4K/21X4L/21X4R/21X4U)				
			< THERMISTOR >				
THP601	⚠	1-809-827-11	THERMISTOR, POSITIVE				
			< TUNER >				
TU101		1-693-340-11	TUNER/VIF (FR) (KV-21C4B/21X4B)				
		1-693-339-11	TUNER/VIF (AEP) (KV-21C4D/21C4E/21C4K/21C4R/21X4A/ 21X4D/21X4E/21X4K/21X4L/21X4R)				
		1-693-339-11	TUNER/VIF (UK) (KV-21X4U)				

REF.NO.		PART NO.	DESCRIPTION				REMARK
			< CRYSTAL >				
X201		1-760-628-11	VIBRATOR, CRYSTAL				
X301		1-760-907-21	VIBRATOR, CRYSTAL				
X302		1-760-710-21	VIBRATOR, CRYSTAL				
**********							
		*A-1638-102-A	C BOARD, COMPLETE ********** (KV-21C4B/21C4D/21C4E/ 21C4K/21C4R)				
		*A-1638-090-A	C BOARD, COMPLETE ********** (KV-21X4A/21X4B/21X4D/21X4E/ 21X4K/21X4L/21X4R/21X4U)				
			< CAPACITOR >				
C701		1-102-115-00	CERAMIC	560PF	10%	50V	
C702		1-102-115-00	CERAMIC	560PF	10%	50V	
C703		1-102-115-00	CERAMIC	560PF	10%	50V	
C704		1-102-824-00	CERAMIC	470PF	5%	50V	
C705		1-102-824-00	CERAMIC	470PF	5%	50V	
C706		1-102-824-00	CERAMIC	470PF	5%	50V	
C707		1-107-651-11	ELECT	4.7MF	20%	250V	
C709		1-162-114-00	CERAMIC	0.0047MF		2KV	
C710		1-126-967-11	ELECT	47MF	20%	16V	
C711		1-101-880-00	CERAMIC	47PF	5%	50V	
C712		1-102-820-00	CERAMIC	330PF	5%	50V	
C713		1-101-880-00	CERAMIC	47PF	5%	50V	
			< CONNECTOR >				
CNC71		*1-568-881-51	PIN, CONNECTOR 6P				
CNC72		*1-568-880-51	PIN, CONNECTOR 5P				
CNC73		1-695-915-11	TAB (CONTACT)				
CNC76		1-695-915-11	TAB (CONTACT)				
			< DIODE >				
D701		8-719-991-33	DIODE 1SS133T-77				
D702		8-719-991-33	DIODE 1SS133T-77				
D703		8-719-991-33	DIODE 1SS133T-77				
D704		8-719-991-33	DIODE 1SS133T-77				
D705		8-719-991-33	DIODE 1SS133T-77				
D706		8-719-991-33	DIODE 1SS133T-77				
D707		8-719-991-33	DIODE 1SS133T-77				
D708		8-719-991-33	DIODE 1SS133T-77				
D709		8-719-991-33	DIODE 1SS133T-77				
D716		8-719-991-33	DIODE 1SS133T-77				
D717		8-719-054-81	DIODE 1SS292T-77				
D718		8-719-991-33	DIODE 1SS133T-77				
D719		8-719-054-81	DIODE 1SS292T-77				
D723		8-719-991-33	DIODE 1SS133T-77				
D724		8-719-054-81	DIODE 1SS292T-77				
			< CRT SOCKET >				
J701	⚠	1-526-990-21	SOCKET, CRT				
			< COIL >				
L702		1-408-425-00	INDUCTOR	220UH			
L703		1-535-303-00	LEAD, JUMPER (5.0MM)				
L704		1-535-303-00	LEAD, JUMPER (5.0MM)				

C H1 H2

REF.NO.	PART NO.	DESCRIPTION				REMARK
		< TRANSISTOR >				
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q704	8-729-906-70	TRANSISTOR BF871-127				
Q705	8-729-906-70	TRANSISTOR BF871-127				
Q706	8-729-906-70	TRANSISTOR BF871-127				
Q707	8-729-200-17	TRANSISTOR 2SA1091-0				
Q708	8-729-200-17	TRANSISTOR 2SA1091-0				
Q709	8-729-200-17	TRANSISTOR 2SA1091-0				
		< RESISTOR >				
R700	1-202-549-00	SOLID	100	20%	1/2W	
R701	1-249-417-11	CARBON	1K	5%	1/4W	
R702	1-249-417-11	CARBON	1K	5%	1/4W	
R705	1-535-143-11	LEAD, JUMPER (10.0MM)				
R706	1-249-399-11	CARBON	33	5%	1/4W	
R707	1-249-401-11	CARBON	47	5%	1/4W	
R708	1-247-815-91	CARBON	220	5%	1/4W	
R709	1-247-815-91	CARBON	220	5%	1/4W	
R710	1-247-815-91	CARBON	220	5%	1/4W	
R711	1-249-417-11	CARBON	1K	5%	1/4W	
R714	1-249-417-11	CARBON	1K	5%	1/4W	
R715	1-249-417-11	CARBON	1K	5%	1/4W	
R716	1-249-417-11	CARBON	1K	5%	1/4W	
R717	1-260-105-11	CARBON	3.3K	5%	1/2W	
R718	1-260-105-11	CARBON	3.3K	5%	1/2W	
R719	1-260-105-11	CARBON	3.3K	5%	1/2W	
R720	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R721	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R722	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R723	1-535-143-11	LEAD, JUMPER (10.0MM)				
R724	1-202-814-11	SOLID	33K	10%	1/2W	
R725	1-202-846-00	SOLID	470K	10%	1/2W	
R729	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R730	1-249-410-11	CARBON	270	5%	1/4W	
R731	1-247-815-91	CARBON	220	5%	1/4W	
R732	1-249-410-11	CARBON	270	5%	1/4W	
R734	1-247-815-91	CARBON	220	5%	1/4W	
R735	1-247-815-91	CARBON	220	5%	1/4W	
R736	1-247-815-91	CARBON	220	5%	1/4W	
R744	1-260-103-11	CARBON	2.2K	5%	1/2W	
R745	1-260-103-11	CARBON	2.2K	5%	1/2W	
R746	1-260-103-11	CARBON	2.2K	5%	1/2W	
		< VARIABLE RESISTOR >				
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M				
**********						
	*A-1646-145-A	H1 BOARD, COMPLETE ********** (KV-21C4B/21C4D/21C4E/21C4K/21C4R)				
	*A-1646-148-A	H1 BOARD, COMPLETE ********** (KV-21X4A/21X4B/21X4D/21X4E/21X4K/21X4L/21X4R/21X4U)				
		< CAPACITOR >				
C900	1-102-114-00	CERAMIC	470PF	10%	50V	
C901	1-102-114-00	CERAMIC	470PF	10%	50V	
C906	1-535-303-00	LEAD, JUMPER (5.0MM)				
C907	1-535-303-00	LEAD, JUMPER (5.0MM)				
C910	1-130-489-00	FILM	0.033MF	5%	50V	
C911	1-130-489-00	FILM	0.033MF	5%	50V	
		< CONNECTOR >				
CN906	*1-564-512-11	PLUG, CONNECTOR 9P				
		< DIODE >				
D908	8-719-109-89	DIODE RD5.6ESB2				
		< JACK >				
J900	1-764-606-11	JACK				
J902	0-552-060-00	AUDIO-VIDEO CONNECTOR				
		< COIL >				
L900	1-408-409-00	INDUCTOR	10UH			
L901	1-408-409-00	INDUCTOR	10UH			
L902	1-408-409-00	INDUCTOR	10UH			
L903	1-408-409-00	INDUCTOR	10UH			
L904	1-408-409-00	INDUCTOR	10UH			
		< RESISTOR >				
R904	1-535-303-00	LEAD, JUMPER (5.0MM)				
R905	1-535-303-00	LEAD, JUMPER (5.0MM)				
R909	1-249-437-11	CARBON	47K	5%	1/4W	
R910	1-249-437-11	CARBON	47K	5%	1/4W	
**********						
	*A-1646-146-A	H2 BOARD, COMPLETE ********** (KV-21C4B/21C4D/21C4E/21C4K/21C4R)				
	*A-1646-149-A	H2 BOARD, COMPLETE ********** (KV-21X4A/21X4B/21X4D/21X4E/21X4K/21X4L/21X4R/21X4U)				
		< CAPACITOR >				
C904	1-104-665-11	ELECT	100MF	20%	25V	
C905	1-126-964-11	ELECT	10MF	20%	50V	
		< CONNECTOR >				
CN907	*1-564-519-11	PLUG, CONNECTOR 4P				
		< DIODE >				
D901	8-719-302-45	DIODE SEL1210S-D				
	*4-203-258-01	HOLDER, LED (D901)				
		< IC >				
IC900	8-742-014-10	RECEIVER HIC SBX1981-51				
		< RESISTOR >				
R900	1-249-417-11	CARBON	1K	5%	1/4W	
R901	1-249-408-11	CARBON	180	5%	1/4W	
R908	1-249-401-11	CARBON	47	5%	1/4W	
**********						

H3

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1646-147-A	H3 BOARD, COMPLETE **********	(KV-21C4B/21C4D/21C4E/21C4K/21C4R)
	*A-1646-150-A	H3 BOARD, COMPLETE **********	(KV-21X4A/21X4B/21X4D/21X4E/21X4K/21X4L/21X4R/21X4U)
		< CONNECTOR >	
CN908	*1-564-518-11	PLUG, CONNECTOR 3P	
		< RESISTOR >	
R911	1-247-843-11	CARBON 3.3K 5% 1/4W	
R912	1-249-429-11	CARBON 10K 5% 1/4W	
R913	1-247-843-11	CARBON 3.3K 5% 1/4W	
R914	1-249-429-11	CARBON 10K 5% 1/4W	
		< SWITCH >	
S900	1-692-979-11	SWITCH, TACTILE	
S901	1-692-979-11	SWITCH, TACTILE	
S902	1-692-979-11	SWITCH, TACTILE	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS (KV-21C4) **********	
⚠	1-411-922-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISC; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	1-452-277-00	MAGNET, BMC	
⚠	1-453-200-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2B)	
	1-504-570-11	SPEAKER (7.5X13CM)	
⚠	1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
⚠	1-590-501-11	CORD, POWER (WITH NOISE FILTER)	
	1-693-340-11	TUNER/VIF (FR)	(KV-21C4B)
	1-693-338-11	TUNER/VIF (AEP)	(KV-21C4D/21C4E/21C4K/21C4R)
⚠	8-738-783-05	PICTURE TUBE (SD-169) (A51JXH61X)	
⚠	8-451-295-43	DEFLECTION YOKE (Y21PFA2)	

****

		ACCESSORIES AND PACKING MATERIALS (KV-21C4) **********	
	*4-042-476-01	BAG, PROTECTION	
	*4-033-050-01	CUSHION (UPPER) (ASSY)	
	*4-033-049-01	CUSHION (LOWER) (ASSY)	
	*4-033-051-11	INDIVIDUAL CARTON	
	4-203-855-51	MANUAL, INSTRUCTION (KV-21C4B)	(GERMAN/ITALIAN/DUTCH/FRENCH)
	4-203-855-11	MANUAL, INSTRUCTION (KV-21C4D)	(DUTCH/GERMAN/TURKISH/ENGLISH)
	4-203-855-71	MANUAL, INSTRUCTION (KV-21C4E)	(SPANISH/PORTUGUESE/HUNGARIAN)
	4-203-855-91	MANUAL, INSTRUCTION	(KV-21C4K/21C4R) (CZECH/ENGLISH/POLISH/RUSSIAN/BULGARIAN)
		REMOTE COMMANDER **********	
	1-473-194-11	COMMANDER, STANDARD TYPE (RM-836)	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS (KV-21X4) **********	
⚠	1-406-828-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISC; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2A)	
	1-544-727-11	SPEAKER (7.5X13CM)	
⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
⚠	1-765-286-11	CORD, POWER	(KV-21X4A/21X4B/21X4D/21X4E/21X4K/21X4R)
⚠	1-776-204-11	CORD, POWER (FILTER)	(KV-21X4L/21X4U)
	1-693-338-11	TUNER/VIF (AEP)	(KV-21X4A/21X4D/21X4E/21X4K/21X4L/21X4R)
	1-693-340-11	TUNER/VIF (FR)	(KV-21X4B)
	1-693-339-11	TUNER/VIF (UK)	(KV-21X4U)
⚠	8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
⚠	8-451-295-45	DEFLECTION YOKE (Y21PFA2BA)	
⚠	8-738-783-71	ITC	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
		ACCESSORIES AND PACKING MATERIALS (KV-21X4)	
		**********	
	*4-039-905-02	BAG, PROTECTION	
	*4-044-002-01	CUSHION (UPPER) (ASSY)	
	*4-044-003-01	CUSHION (LOWER) (ASSY)	
	*4-044-004-11	INDIVIDUAL CARTON	
	4-203-823-41	MANUAL, INSTRUCTION (KV-21X4A)	(ITALIAN)
	4-203-823-51	MANUAL, INSTRUCTION (KV-21X4B)	(FRENCH/ITALIAN/GERMAN/DUTCH)
	4-203-823-11	MANUAL, INSTRUCTION (KV-21X4D)	(GERMAN/GREEK/DUTCH/TURKISH/ENGLISH)
	4-203-823-71	MANUAL, INSTRUCTION (KV-21X4E)	(SPANISH)
	4-203-823-81	MANUAL, INSTRUCTION (KV-21X4E)	(PORTUEGUESE/FINNISH/SWEDISH/ DANISH/NORWEGIAN/HUNGARIAN)
	4-203-823-91	MANUAL, INSTRUCTION (KV-21X4K/21X4R)	(CZECH/ENGLISH/POLISH/ RUSSIAN/BULGARIAN)
	4-203-823-61	MANUAL, INSTRUCTION (KV-21X4L/21X4U)	(ENGLISH)
		REMOTE COMMANDER	
		**********	
	1-473-194-11	COMMANDER, STANDARD TYPE (RM-836)	

REF.NO.	PART NO.	DESCRIPTION	REMARK